No. 8130

# United States
# Circuit Court of Appeals
## For the Ninth Circuit.

INLAND POWER AND LIGHT COMPANY,
a corporation,

Appellant,

vs.

FAY M. GRIEGER and MARY LOIS GRIEGER,

Appellees.

# Brief of Appellant

**Upon Appeal from the District Court of the United States for the Western District of Washington, Southern Division.**

ELLIS & EVANS,
Overton G. Ellis,
Robert E. Evans,
1205 Rust Bldg.,
Tacoma, Washington.

LAING & GRAY,
John A. Laing,
Henry S. Gray,
1504 Public Service Bldg.,
Portland, Oregon,
Attorneys for Appellant.



SWEENEY, STRAUB & DIMM, PRINTERS, PORTLAND, ORE.

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SWEENEY, STRAUB & DIMM, PRINTERS, PORTLAND, ORE.

## STATEMENT OF THE CASE

This action was brought by appellees (plaintiffs below) to recover from appellant (defendant below) damages in the sum of $15,150.00, alleged to have been sustained to their property from flood waters which they allege were negligently released by appellant through the flood gates of appellant's dam on the Lewis River on or about December 21st and 22nd, 1933, appellees claiming that appellant augmented the natural flow of the stream to their pecuniary damage in that amount. (Complaint; Tr. 2 to 10).

The cause was tried to a jury, and at the close of appellees' case in chief, appellant moved for a nonsuit (Tr. 198), which was denied. An exception to the ruling denying a nonsuit was duly taken and allowed (Tr. 198). Appellant thereupon stood upon its motion for a nonsuit, offered no testimony, and rested its case. (Tr. 198). The Court then instructed the jury, which returned a verdict for appellees in the sum of $4,000.00 (Tr. 20), and judgment on the verdict was entered. (Tr. 24-25). This appeal is from that judgment.

Appellant took no exceptions to the Court's instructions, and the trial judge, in settling the bill of exceptions, certified that "in view of the present assignments of error, the instructions are not considered upon the present record material". (Tr. 199-200). Appellant's petition for a new trial (Tr. 20-23) was denied, and an exception to the ruling was allowed. (Tr. 23).

The principal grounds of the motion for a nonsuit, as well as of the petition for a new trial, were the total

failure of proof of actionable negligence, the insufficiency of the evidence to support the verdict or any verdict in favor of appellees, and that any verdict rendered in their favor on the evidence would be and was wholly speculative and conjectural. Such a challenge to the sufficiency of the evidence has made it necessary for appellant to bring up for review, in narrative form, the entire testimony. (Tr. 40-197).

As the exhibits consisted solely of photographs, maps and graphs it was stipulated by the parties, and ordered by the trial judge, that all such original exhibits be forwarded to the clerk of this court (Tr. 36-37), and, in conformity with such order, their reproduction or printing in the printed transcript of record was dispensed with by order of the Senior Judge of this court. (Tr. 207).

At the time this controversy arose, appellant owned and operated an hydroelectric plant on the Lewis River, located at Ariel, approximately twelve miles north and east of Woodland, Washington. (Compl., Par. I; Tr. 2).

The Lewis River forms the boundary between Clark and Cowlitz counties. (Tr. 162). The river drains an area of about 750 square miles above Ariel, including some mountain peaks. It gets about one-sixth of the ice cap of Mount Adams, and about half of that of St. Helens. (Tr. 149). A map of the Lewis River drainage area was admitted in evidence as appellees' Exhibit 16. (Tr. 150).

The main structural features of appellant's hydroelectric project at Ariel consist of a high arch-type con-

crete dam, equipped with five flood gates of radial type (Tr. 178) that operate like a quadrant working on a hinge (Tr. 85), and a power house with appurtenant facilities. The flood gates are normally operated electrically and, when wholly or partially raised, create the spillway through which the waters of the river are discharged or spilled upon a concrete apron, from which they flow on down the river channel in a westerly direction toward and through the Town of Woodland. (Tr. 46). The dam creates a lake or reservoir covering approximately 4000 acres at the maximum, and approximately 3900 acres at elevation 235. (Tr. 145). On the south or Clark County side of the river, near the base of the dam, is located the power house, which secures the water for its operation through a pipe or penstock, some fifteen feet in diameter, which extends through the dam and draws its supply from the reservoir, sometimes referred to in the record as "Lake Merwin". The center of this penstock is at elevation 60 feet. (Tr. 43). The bottom of the lake at the dam is elevation 50. (Tr. 84). The generating capacity of the power plant is approximately 45,000 kilowatts (Tr. 79), and when operated at full load the carrying capacity of the penstock is something over 3000 second feet of water. (Tr. 78). An excellent reproduction of the main structural features is shown in a photograph of the project, in evidence as Appellees' Exhibit 8. (Tr. 79).

The five flood gates are a part of and extend laterally across the face of the dam. The smallest gate, or the so-called "control gate", is the most northerly one, on the Cowlitz County side, and is 10 feet wide and 32½ feet

high. This small control gate is used for most of the operations. It is the one seen on the extreme left of the spillway when facing the photograph, Exhibit 8. (Tr. 90). The operation of this gate is normally controlled from the power house (Tr. 78), and under normal operating conditions the operators in the power house, by raising or lowering this control gate, are enabled to maintain the water level in the reservoir at any desired elevation. The normal operating level is at elevation 235. (Tr. 135). Each of the other four gates is 39 feet wide and approximately 32½ feet high. (Compl. Par. IV; Tr. 4). Each of the four large gates will spill approximately 30,000 second feet, and the small control gate about 7,000 second feet, when the elevation of the water level of the reservoir is 237. (Tr. 79). The gates are used to maintain the water in the reservoir at the desired level. (Tr. 89). After the winter storage has been secured, the water is maintained at approximately elevation 235 by operating the gates as required. As a gate is raised the water falls from the bottom of the gate. (Tr. 178).

While the complaint refers to the dam as being constructed "to a height of approximately 240 feet", and to the gates as enabling the water in the reservoir to be "lowered to approximately 205 feet" (Compl. IV, Tr. 3-4), the testimony shows that these figures refer to elevations above mean sea level (Tr. 178; 85), which is the datum plane. (Tr. 89).

The project is under the jurisdiction of the Federal Power Commission (Tr. 98) which requires records to be kept of the elevation of the water in the reservoir and of the flow of the river at the Ariel dam. (Tr. 90-91

and 98). The original records furnishing such data are submitted in the form required by the Federal Power Commission, and are the property of that Commission, but are kept in the office of the United States Bureau of Geological Survey at Tacoma. (Tr. 90). Such original records are considered so thoroughly accurate that they are prepared for publication on a daily basis (Tr. 96), they are published in the government's water supply papers (Tr. 98), and are accepted as the authentic official records of reservoir elevations and stream flows at the Ariel dam. (Tr. 107). Such records, when considered with the known size of the gates and the extent to which they are open at any given time, enable the government's representatives, or any other competent person, to compute with reasonable accuracy the discharge of water in second feet at any given time. (Tr. 107).

The recording station at Ariel is located on the dam, and the continuous record of the elevation or water level of the reservoir is produced and recorded mechanically and automatically by means of a pencil operated by a clock. A sheet of paper is passed around a cylinder which operates just beneath the pencil. If the cylinder is not rotated, the pencil during the week will make a straight line across the chart or paper. The cylinder has a wheel on one end over which passes a tape, and on the other end of the tape, and connected to it in the stilling well in the reservoir, is a float. As the water level rises or falls in the reservoir and in the stilling well, the tape in passing over the wheel turns the wheel and correspondingly turns the cylinder, thus causing the pencil to record on the chart or paper the variations in the eleva-

tion of the surface of the reservoir. Each sheet of paper records one week's operations. The chart or paper is graduated into vertical and horizontal lines, with the result that the rise or fall of the float in feet is translated into the graduated scale on the chart or paper, so that, regardless of what the elevation of the reservoir may be at the time, the pencil makes a corresponding mark on the chart or graph. (Tr. 91). The chart or graph traced from 8:00 A. M. of Saturday, December 16 to 8:00 A. M. of Saturday, December 23, 1933, includes the days of interest in this action and is in evidence as Appellees' Exhibit 13. The horizontal lines on Exhibit 13, with numbers indicated on each side of the chart, represent elevation in feet above mean sea level, each such horizontal line representing a difference in elevation of one-half of one foot, and the heavier horizontal lines, with the marginal figures opposite them, representing a difference in elevation of five feet, each such five feet being subdivided into ten half-foot spacings represented by the less prominent lines. Similarly, the chart (Exhibit 13) is spaced into seven twenty-four hour periods, starting and ending with midnight of two Saturdays. Each such twenty-four hour period is divided by heavy vertical lines marking off eight-hour intervals, which are in turn subdivided by lighter vertical lines, the space between each two such lighter vertical lines representing a two-hour interval. Consequently, Exhibit 13 shows the elevation of the surface of the reservoir at any given hour of day or night between 8:00 A. M. of Saturday, December 16, and 8:00 A. M. of Saturday, December 23,

1933, and the information so shown, when considered in connection with the known openings of the gates at the corresponding time, enables reasonably accurate computation in second feet of the discharge of water through the spillway at such particular time. (Tr. 107).

Records of the natural stream flow of Lewis River were originally made by the government at a gauging station at Amboy, a station located within the area later absorbed by the creation of the reservoir. The records of that station cover the period from February, 1911, to April, 1931. (Tr. 101). Since the Ariel project was placed in operation in 1931 (Tr. 41) the recording station which shows the height of the water in the lake has been maintained at the dam. This record is used in conjunction with a gauging station located downstream from the dam which was installed several years prior to April, 1931. (Tr. 104). The records from the water surface recording station at the dam and the gauging station below the dam are used by the United States Bureau of Geological Survey for the purpose of determining the natural stream flow of the Lewis River at Ariel. (Tr. 107).

Prior to the flood of December, 1933, the greatest natural stream flow of Lewis River during the period of the government's record beginning in February, 1911, was 60,000 second feet at the Amboy station. That was just an *instantaneous* peak, and was reached on December 18, 1917. (Tr. 102-103).

The site of the Ariel hydroelectric project was first located in 1921, and the consulting engineer who made or directed all of the investigations of Lewis River, prior

to actual construction of the project beginning in 1929 (Tr. 144), made extensive investigations of the watershed and of the river, devoting half of his time to that work during the eight years between 1921 and 1929. Such investigations included establishing recording stations on the river, examination of the history of the river as to past floods and freshets for the purpose of determining its historical flood peak (Tr. 146-147), interviewing old settlers in the valley, and examining log drifts along the river, and high water marks (Tr. 147-148), from all of which, including an office record of all floods on the river since the 60's, the instantaneous peak of 60,000 second feet at Amboy in December, 1917, was found to be the historical peak in the modern history of the river. (Tr. 149). The flow of the river at Ariel is roughly ten per cent greater than that at Amboy. (Tr. 147). As the result of such investigations the estimated maximum flow ever to be expected at Ariel was determined to be 66,000 second feet, but in constructing the plant the gates were designed to carry 130,000 second feet, as it is common practice among engineers to provide spillways of double the capacity of the highest flood known. (Tr. 147). In designing the plant it was not considered probable that the power house might ever be flooded out. (Tr. 146).

For many days prior to the 21st day of December, 1933, there had been "great and unusual" rainfall in the watershed of the Lewis River. (Compl. Par. V; Tr. 5; also Tr. 58). The weather was very warm for that time of year, and was warm enough to melt snow on the high places. (Tr. 157).

The river reached such height during the week beginning December 17, 1933, that on the morning of the 20th the water was close to the level of the Pacific Highway at Woodland. (Tr. 60).

On the evening of December 20, 1933, the water of the river was up very close to the fire hall in Woodland, and the fire apparatus was being removed from the building. (Tr. 130). The people were panicky, and expecting higher water. The operators of the dam kept in constant telephone communication with the people at Woodland. (Tr. 131). It was then raining very hard, and that condition continued through December 21st and part of the 22nd. (Tr. 131).

One of appellees' witnesses (Carl E. Insull) owned a 47½ acre farm on the bank of the Lewis River near Woodland. (Tr. 57; 61). At 5:00 P. M. on Wednesday, December 20th, he set a three-foot cedar stick in front of his house to mark the rise of the water. (Tr. 60). At that time the current was very strong. (Tr. 61). At 4:00 o'clock in the morning of Thursday, the 21st, the water had risen over the three-foot stick, over his fences, and was around his house so that he could not get out. (Tr. 61-62). At that time the discharge at Ariel was 76,000 second feet (sheet for December 21 of Ex. A-2), and the water in the reservoir was rising. (Ex. 13). By that time the current in the river was "terrible". (Tr. 62). The river was still higher that evening, and reached its peak at this man's farm between 12:00 and 1:00 o'clock on Friday morning, December 22nd. The river started to recede from that time on. (Tr. 62).

At the State Fish Hatchery, located on the river

about four miles downstream from the Ariel dam, the roadway running along the bank of the river was under six or seven feet of water at half past seven on the morning of December 21st. The river was cutting into its banks, and a house on the lower ground next to the road in the vicinity of the fish hatchery floated away and was carried downstream. Cottonwood trees were washed out by the river that same day. (Tr. 150-152).

At 8:15 in the evening of December 21st the river was out of its banks and so deep over the Pacific Highway at Woodland that one of appellees' witnesses stalled his automobile in trying to get through it, and had to push his car to higher ground. (Tr. 54-55). The water was then high enough to get into the motor of his car. (Tr. 56). At 5 o'clock on the afternoon of December 21st, the lower part of Woodland was flooded, and shortly before 8 o'clock that evening the town was pretty generally flooded. (Tr. 56).

Following many days of heavy rain, it rained an additional 3½ inches at Ariel on the 21st. (Tr. 87). The stream continued to rise, and by 10 o'clock P. M. on December 21st the small flood gate and three of the four large gates were wide open, the fifth or last large gate was up 9 feet, 105,000 second feet was then being discharged through the spillway (Tr. 129), and the water in the reservoir was still rising. (See Exhibit 13). At 10:55 P. M. that evening the water was still rising. (Exhibit 13). At that time water began to enter the power house, and a little before midnight orders were given to complete the opening of the last gate (No. 5), which at that time was already open between 9 and 13

feet (Tr. 133), and to shut off the power. At that time telephone communication had been lost, the operators in the power house were wading in a foot of water and, when they were leaving the power house to cross the swinging footbridge leading to the other side of the river, the water current on the transformer platform of the power house was so strong that two of the seven men were washed off their feet. (Tr. 132-134).

Following the completion of the opening of gate No. 5 all operations were conducted on top of the dam, where the gates are located. (Tr. 133; 142).

After the opening of gate No. 5 had been completed at 12:16 A. M. on December 22 (Tr. 86), all five gates remained open until 2:00 P. M. of that day. The opening of gate No. 5 was then reduced from 26½ feet to 20 feet, at which time the spill was 112,600 second feet. (Tr. 142).

All gates then remained in the same positions, and the spill of 112,600 second feet continued to 8:30 P. M. of the 22nd. The opening of gate No. 5 was then reduced from 20 feet to 14 feet, and the spill was thereby reduced to 101,000 second feet. (Tr. 142-143). At 11:00 P. M. of December 22 the opening of gate No. 5 was reduced from 14½ feet to 8½ feet and the spill was then 92,700 second feet. (Tr. 143).

Regardless of whether electric power was available, all or any of the gates could have been closed at any time, as each gate is equipped with a magnetic hand brake, with a spring tension which may be released by hand. (Tr. 86; also Tr. 124-125). On the cross-examination of appellees' witness, David J. Shore, a photograph of

such hand brake was admitted in evidence as appellant's Exhibit A-1. (Tr. 125).

At no time during this flood period were all the gates opened or all the gates closed in one operation, nor was even one of the large gates ever completely opened or completely closed in one movement or operation. They were opened gradually, as the rain and flood increased. (Tr. 50). The largest single change of position of one of the large gates was the final operation, begun just before midnight on the night of December 21st, at which time gates Nos. 1, 2, 3 and 4 were already wide open, gate No. 5 was already open from 9 to 13 feet (Tr. 133), and was then opened the remainder of its full capacity of 26½ feet, such opening being completed at 12:16 A. M. on December 22nd.

When the Court in reading the record observes references to the opening or closing of the gates, it should always be borne in mind that the witness is referring to the *partial* opening or *partial* closing of a single gate, as gate operation was never conducted in any other way, subject, of course, to the shifting of the total discharge of the small gate over to one of the large gates for the purpose of facilitating control of the lake elevation. (Tr. 78).

On the cross-examination of the witness David J. Shore, there were admitted in evidence, as appellant's Exhibit A-2, the original log sheets cut from the log book of appellant's power house operations. (Tr. 125). These log sheets cover the period from December 2 to December 21, both dates inclusive. Each page represents one calendar day's operations, from midnight to

midnight, except that, following the enforced abandonment of the power house, notes of the operations were taken on top of the dam (Tr. 141-142) and original entries were not made in the log book for December 21st after 11:00 P. M., or on the 22nd.

The Federal Power Commission requires that records be kept for the purpose of determining the flow or discharge at the Ariel dam (Tr. 98), and the data from the original log sheets were furnished by appellant to the United States Bureau of Geological Survey at Tacoma. (Tr. 104). Such data were accepted by the federal government as accurate. (Tr. 96). The information disclosed by this original log record as to gate openings at a particular time, coupled with the information disclosed by the graph showing the water elevation in the lake at the corresponding time (Exhibit 13), enables computation to be made of the quantity of water being discharged at such time. (Tr. 101; 107).

For the convenience of the Court there has been added as an appendix to this brief (See Table I) a reproduction, in tabular form, of (1) information disclosed by Exhibit 13 as to the water elevations of the reservoir for certain hours from 8:00 A. M. of December 16 to 8:00 A. M. of December 23, 1933; (2) all of the data supplied by the log sheets (Exhibit A-2) as to gate positions for the period from December 2 to 11:00 P. M. on December 21, both inclusive, supplemented by data reproduced from the testimony, which furnishes similar information as to gate positions on December 1st, and also on December 21st after 11:00 P. M., as well as through December 22nd and to 1:00

A. M. on December 23rd; and (3) the spill or discharge of water through the gates during that entire period. (Note: Where references are found in the transcript to appellees' Exhibit 11 or Exhibit 12, it should be remembered that those two exhibits are identical with appellees' said Exhibit 10. (Tr. 198)).

In addition to the recording station maintained at the Ariel dam, a gauging station was concurrently maintained by the United States Bureau of Geological Survey downstream from the dam for the purpose of determining the *mean daily discharge* of the river at Ariel, pursuant to requirements of the Federal Power Commission. (Tr. 98). At that station the water surface elevation and corresponding time are recorded on a chart or graph, automatically and mechanically, similarly to the method followed at the dam. (Tr. 96). The discharge at that gauging station is normally computed by the use of a chart or graph (appellees' Exhibit 14), which shows the relation between the discharge and the elevation of the river at that gauging station (Tr. 97-98), and which is used in conjunction with a mechanical integrator, which is an instrument placed along in the graph, thus enabling the mean discharge for a 24-hour period to be readily determined. (Tr. 99-100). The flood of December, 1933, submerged, by several feet, the recording mechanism at that gauging station, with the result that the chart or paper record made at that station was reduced to pulp, and the record of that station for the week beginning with December 18th was thus destroyed. (Tr. 100). The mean daily discharge records at that downstream station, shown on Exhibit 10, for the several

days that its recording mechanism was out of commission, were therefore determined from the gate openings at the dam (Tr. 104), considered in connection with the known discharge of each gate under a certain elevation of water. (Tr. 101). For that reason the daily mean discharges shown on Exhibit 10 carry in front of them for those days the abbreviation "Est.", for "estimated", in lieu of their determination in the customary manner by the use of the chart, Exhibit 14, and the mechanical integrator.

Exhibit 10 also shows, in its upper left-hand corner, that the peak discharge at Ariel was 129,000 second feet. This occurred sometime in the early morning hours of December 22nd. (Tr. 97; Ex. A-2; Appendix, Table I, page IV).

The mean daily flow at Ariel on December 21 was 84,000 second feet, and was 114,000 second feet on December 22nd. (Exhibit 10). Appellees' Exhibit 9 shows the mean or average daily elevation of the water in the lake. (Tr. 92). For convenient reference there has also been added as an appendix to this brief (see Table II) a tabulation showing the mean daily elevations of the water in the lake, taken from Exhibit 9, and the mean daily discharge of water for the corresponding day, expressed in second feet, taken from Exhibit 10, uniformly computed for each 24-hour period from midnight to midnight.

The "mean daily discharge" is found by adding the hourly discharges during such period from midnight to midnight, and dividing by 24. (Tr. 99). The distinction between the "peak" and the "mean" is that the mean is

an average of all the water flowing during the day, but within such day, with a mean of 114,000 second feet, there might be a minimum flow of 100,000 second feet and a peak flow of 129,000 second feet. (Tr. 97). Unless the flow were uniform throughout the day, the mean presupposes some flow higher, and some flow lower, than the mean. (Tr. 101). The maximum is of course always much greater than the mean. (Tr. 177).

The peak elevation of the water in the lake, 237.6 feet, was reached at midnight on December 21st, or possibly a few minutes before. (Ex. 13; Tr. 93). Following the completion of the opening of gate No. 5 to the extent of its then remaining capacity, and during the ensuing 24-hour period from midnight of December 21st to midnight of December 22nd, the elevation of the water in the lake was lowered from 237.6 feet to elevation 233.6 feet. During that 24-hour period the quantity of water discharged in excess of the then natural flow of the river was calculated by appellees' engineer to be 13,600 acre feet (Tr. 177), which was the equivalent of a continuous flow of 6,800 second feet (Tr. 177), an amount slightly less than that which can be discharged by the small control gate, with the lake elevation 237 (Tr. 79), and which represented a little less than 6 per cent of the natural stream flow during that 24-hour period. (Tr. 185-186).

A cubic foot per second, or "second foot" as it is commonly called, is a cubic foot of water passing a given point in one second of time. The term "acre foot" means a volume of water equal to one acre in area and one foot

in depth. The terms "second foot" and "acre foot" are both measurements of quantity. (Tr. 95).

Following the flood of December, 1933, appellees brought this action, alleging in their second amended complaint (Tr. 2-10) that in the construction of its hydroelectric plant, in the storage of water in the reservoir, and in the operation of the flood gates during the flood of December, 1933, appellant was negligent, and that such negligence was the proximate cause of the damage to the plaintiffs' property, located some seven or eight miles downstream from the dam. The allegations of negligence, in more detail, were in substance:

> (a) That the power plant was carelessly and negligently erected immediately below the base of the dam, and so situated that if the waters rose in the lake above the level of approximately 240 feet by the gauge, the waters would be discharged over the top of the dam into and upon the power plant, and would inflict great damage upon it so that it was impracticable for the defendant to maintain the dam with the gates closed and thereby permit the waters to accumulate in the lake and ultimately pass over the top "into said dam".
>
> (b) That the chute or apron below the dam was constructed with bulkheads at the sides forming a chute, and so designed as to direct into the current of the river the water released through the flood gates, and thereby to increase not only the quantity but the force and violence of the water released through the flood gates.
>
> (c) That, notwithstanding the said heavy rainfall, appellant carelessly and negligently permitted

the waters of the reservoir to rise and remain at and above a gauge level of 235 feet.

(d) That appellant carelessly and negligently failed to open the flood gates sufficiently to permit the accumulated waters of the stream to flow gradually past the dam as they were wont to do by nature.

(e) That on or about midnight on December 21, 1933, appellant "opened all its aforesaid flood gates" and thereby caused vast quantities of water to be discharged into the river, increasing the volume and force of the river, causing backwater to form behind the apron, to enter the power house, and to disable the machinery, and that appellant was then unable to close its flood gates, causing the gates to remain open for approximately twenty-four hours, during which period approximately 17,000 acre feet of water were discharged through the flood gates, in addition to the normal flow of the stream, and that that result was all due to appellant's negligence in the construction of its dam, power house and flood gates.

Appellant by its answer (Tr. 11-19) admitted its ownership and operation of the project, and admitted the allegations of the complaint as to the number and size of the flood gates; denied that water could be impounded to any elevation in excess of approximately 238.35 feet without spilling water over the gates themselves, if closed; denied that the power house was constructed immediately below the base of the dam; denied that if the waters of the lake rose above approximately 240 feet elevation by the gauge, or to any other elevation, they would be discharged into or upon the power

plant or would do any damage to it, and denied that in the location, erection or construction of the power plant or of the power generating machinery appellant was in any respect careless or negligent; admitted that it was impracticable to permit the waters of the river so to accumulate in the lake as to pass over the top of the dam, and alleged that the dam was not designed to discharge the waters of the lake in that way. Appellant denied that the bulkhead or guide walls of the apron immediately below the flood gates were designed to protect the power plant, and denied that their effect was to increase the quantity of the water, or to increase its velocity except for a short distance downstream from the apron, and denied that any damage to appellees' lands was due to any negligence of appellant.

By its further affirmative defense appellant alleged that the Lewis River was a navigable stream, and that in the construction of its dam appellant had been required to obtain and had obtained the permission of the United States Government, acting by and through the Federal Power Commission, and had also been required to obtain and had obtained the permission of the State of Washington, acting by and through its Department of Conservation and Development (Tr. 16-19), but as appellant offered no testimony there is nothing before the Court in support of these affirmative allegations except in so far as testimony supporting them was furnished by appellees' own witnesses. (Tr. 90, 91, 98, 106, 179).

Appellant by its answer further alleged that the unprecedented rainfall, high temperatures and melting

snows concurring during December, 1933, resulted in unprecedented flood conditions in the Lewis River and in unprecedented hazards and perils from the flood waters, and that during the flood appellant had maintained and operated the flood gates of its dam in accordance with the best engineering practice and skill, consistently with the flood perils existing at said time and place, and solely with the purpose of minimizing the damage that would inevitably result to lower landowners on the stream by reason of the natural runoff of the flood waters. (Tr. 16-17). Appellant further alleged that the flood was an act of God for which it was in no way responsible or liable; that any damage sustained by appellees was solely due to such unprecedented flood, and that none of their damage was caused by or resulted from any negligent act or omission of appellant in the construction, maintenance or operation of its dam, flood gates, power house or other facilities, and denied affirmatively that appellant was at any time or in any way careless or negligent in the construction, maintenance or operation of any of said structures, or otherwise. (Tr. 17-18). Appellees' reply put in issue all affirmative allegations of appellant's answer, so far as inconsistent with the allegations of their second amended complaint. (Tr. 19).

Appellees' lands lie wholly on the Clark County side of the Lewis River (Tr. 162), and some seven or eight miles below the Ariel dam (Tr. 172), or about four miles up the river from Woodland. (Tr. 183). The deed to the property calls for 100.6 acres. (Tr. 166). Mr. Grieger, one of the appellees, is a dairyman. (Tr. 152).

At the times involved in this action the improvements on his farm consisted of two residences (Tr. 153), two barns, and several other small buildings. (Tr. 154-155).

Prior to the flood of December, 1933, the course of the river ran "pretty straight" toward appellees' lands (Tr. 72), but on their easterly boundary the river turned its course and ran northwesterly along the east boundary of the Grieger land, and on the northwest corner of the lands it turned again and flowed down along their west side. (Tr. 155). As the river approached the Grieger property there was a low place or swale where a jetty or sheer boom had been built to turn logs coming down the river. Without the sheer boom the logs would run about a quarter of a mile right along between there and the river. (Tr. 111-112; 120-121). A pencil sketch, made of the lay of his lands by Mr. Grieger, was admitted in evidence as appellees' Exhibit 18, for illustrative purposes. (Tr. 162). This sketch shows the bend in the river and the river's channel as it existed before the flood of December, 1933, and also shows where the Grieger lands were cut into and eroded by the flood. (Tr. 162). The distance from the east to the west boundaries of appellees' lands is approximately 1300 feet, but prior to the flood the river travelled "in the neighborhood" of three quarters of a mile around them, as indicated where the red and black lines are together on Exhibit 18. (Tr. 163).

Water started over the banks of the Grieger pasture and farm land on December 20th (Tr. 70; 167), but no cutting was observed on that day. (Tr. 69). No cutting was observed on the Grieger land up to the 21st. (Tr.

158). When Grieger came out in the morning of Thursday, the 21st, the water on his place was five or six feet deep (Tr. 169), and was fairly high at noon of that day. (Tr. 170). From three to five feet of water was flowing through Grieger's farm on the afternoon of the 21st. (Tr. 172).

During the flood the river cut its way approximately straight across appellees' bottom lands, as indicated on Exhibit 18, eroding the soil clear to the gravel, cutting out some of appellees' timber, creating holes of various sizes, and leaving heavy deposits of sand in some places. (Tr. 163-164). Driftwood consisting of trees from four inches to a foot and a half through, including three or four big cottonwoods, were deposited on the Grieger lands, there being as many as 21 trees counted in one pile after the flood. (Tr. 159). One big cottonwood tree was washed up on top of two apple trees, where it was resting after the flood. (Tr. 159). Piles of coarse sand were created from six inches to six feet deep, and after the flood two large cottonwoods were lying on a big sand pile. (Tr. 159-160). Seven pictures of appellees' property, taken after the flood, were admitted in evidence as appellees' Exhibits 1 to 7 (Tr. 65-66), and a picture depicting the type of sand washed in was admitted in evidence as appellees' Exhibit 17. These pictures graphically show the ravages of the flood. Appellees' fences were carried away (Tr. 160) but no physical damage to any of appellees' buildings was claimed.

Approximately 45 acres of appellees' lands were eroded and washed away by the flood, and appellees claimed that "in the neighborhood" of 30 or 35 acres were

covered with sand (Tr. 160), but on the trial appellees found that they were including a claim for sand damage to some fifteen or twenty acres which lie north of their line and which were not within the call of their deed or in their complaint. (Tr. 166-167).

Appellees' engineer, W. J. Roberts, expressed his familiarity with the Lewis River over a period of 24 years, and testified that "throughout time" the river had travelled in different channels (Tr. 186); that it is the habit of rivers to do that sort of thing. (Tr. 187). The silty loam of which the Grieger farm was composed (Tr. 156) is light, and the finest matter that floats, and is readily subject to erosion. The Grieger soil which was washed out in the flood of December, 1933, was the very soil that was brought in and settled there as the result of erosion of up-river lands in prior floods. (Tr. 187). It is the cutting element of the water that results in erosion; as the water comes up under the bank it cuts in, and as it goes over it cuts a little more; that is the way erosion works. (Tr. 188). It is the volume of water and the velocity of it that effects the erosion. (Tr. 189). Erosion started on the Grieger place on the edge of the old river channel, pretty early in the flood stage. As the water came up, the erosion would come up a little farther. Silty loam would start to erode at a velocity of four or five feet per second. (Tr. 191). Erosion might start on the Grieger place when the discharge at the dam was somewhere around 50,000 second feet, and as the discharge increased the erosion would increase, especially in a tortuous ox-bow and horseshoe bend, as at the

Grieger place. Such a bend is very subject to erosion. (Tr. 193-195).

Erosion depends upon the velocity of the stream, and not the height of the stream, but the fuller the stream is, the more water flows, and then the swifter it becomes. They go together. (Tr. 180). Water is very inelastic, and would have a considerable slow-down after leaving the tailrace of the dam. (Tr. 179). If water is spilled into a pool it tends to stop the speed. There is a very deep pool in the river just below the spillway; that would tend to slow the velocity. (Tr. 184).

The velocity of a stream depends on "the slope of the channel and nothing else." (Tr. 194). The degree of slope is the difference in the elevations at two points, divided by the horizontal distance. (Tr. 185). To figure the velocity of water between any two points one must know the head or slope, the course of the stream, the elevations of the bed of the stream, and the width and condition of the banks. (Tr. 184). No such measurements or computations were made in the instant case (Tr. 185), nor was any study made to determine at what second-foot flow of the river it would overflow the bank at the Grieger place, though such determination could have been made approximately. (Tr. 189-190).

From the known data as to the area of the lake and the lowering of the elevation of the water from midnight of December 21st to midnight of December 22nd, appellees' engineer computed that the quantity of water discharged through the gates in that 24-hour period exceeded the natural stream flow during such 24-hour period by 13,600 acre feet (Tr. 185), or a little less than

6% of excess water over and above the natural stream flow at the time. 13,600 acre feet was equivalent to a flow of 6800 second feet during that 24-hour period. (Tr. 177).

All or any of the flood gates could have been closed by hand at any time. (Tr. 124-125). The several changes of position in gate No. 5 between 12:16 A. M. on December 22 and midnight of that day (Tr. 142-143; Appendix, Table I, page IV), and the net lowering of the elevation of the lake to the extent of four feet during the corresponding time, as shown by Exhibit 13, all represented the exercise of the judgment of the operators of the dam, whose judgment was prompted by their knowledge of the way the river had acted at other times when there was a freshet, and by the heavy rainfall then continuing, and by the probability that on the night of the 22nd they would experience a still greater rise of the river than had been encountered up to that time. (Tr. 87). The holding back of water during the 21st had been ordered after conference with the Mayor of Woodland. (Tr. 143).

The primary question involved on this appeal is whether there is any competent evidence to support the verdict, or any verdict, in appellees' favor. (Tr. 40-197). This question was raised, successively, (1) by appellant's motion for a nonsuit (Tr. 198), which was denied and an exception allowed (Tr. 198); (2) by appellant's petition for a new trial (Tr. 20), which was denied and an exception allowed (Tr. 23), and (3) by appellant's assignment of errors. (Tr. 30).

## ASSIGNMENT OF ERRORS

(Tr. 30-31; Bill of Exceptions, 110, 111).

NOW COMES Inland Power & Light Company, a corporation, defendant in the above numbered and entitled action, and, in connection with its petition for an order allowing an appeal in said action, assigns the following errors which said defendant avers occurred upon the trial thereof, and upon which it relies to reverse the judgment entered herein, as appears of record:

I.

That the Court erred in denying said defendant's motion for nonsuit, made at the close of the plaintiffs' case, upon the several grounds that: (1) the plaintiffs had wholly failed to prove any actionable negligence; (2) that the evidence conclusively showed that an unprecedented flood caused the damage to plaintiffs' property, regardless of any conduct of the defendant; (3) that the evidence affirmatively showed reasonable care by the defendant; and (4) that any verdict rendered on the evidence would be purely speculative and without basis for computation.

II.

That the Court erred in entering judgment on the verdict herein, in that said verdict was against law and unsupported by the evidence.

III.

That the Court erred in denying said defendant's motion for a new trial herein, in that the Court thereby erred as a matter of law, and failed to exercise a sound judicial discretion.

WHEREFORE said defendant prays that the judgment of said Court be reversed.

# ARGUMENT

## ASSIGNMENT OF ERROR NO. I

**That the court erred in denying said defendant's motion for nonsuit, made at the close of the plaintiffs' case, upon the several grounds that: (1) the plaintiffs had wholly failed to prove any actionable negligence; (2) that the evidence conclusively showed that an unprecedented flood caused the damage to plaintiffs' property, regardless of any conduct of the defendant; (3) that the evidence affirmatively showed reasonable care by the defendant; and (4) that any verdict rendered on the evidence would be purely speculative and without basis for computation.** (Tr. 30-31).

Said Assignment of Error No. I specifies four separately numbered grounds of error in the denial of appellant's motion for a nonsuit. We will discuss these grounds separately.

### 1. Plaintiffs wholly failed to prove any actionable negligence

(Assignment of Error No. I; First Ground Assigned; Tr. 30)

Directing attention to the allegations of the complaint, we will point out from the record (a) the substance and scope of the evidence offered by appellees, (b) what appellees were required to prove but failed to prove, and (c) why appellees' own proofs constituted a complete defense to their allegations of negligence.

It should be borne in mind that the testimony under review is that of the appellees alone. Appellant offered no testimony, for the reason that appellant believed and

still believes that appellees not only failed to sustain their charges of negligence, but by their own witnesses proved the affirmative defenses pleaded in appellant's answer. (Tr. 16-18).

The negligence charged in appellees' second amended complaint consists, in general, of (1) alleged defective and negligent construction of the Ariel power plant itself; and (2) alleged negligence in the operation of the flood gates and in the handling of the flood waters. (Tr. 4-8).

**1-A There is no evidence of defective or negligent construction of the project**

The allegations involving negligent construction of the power plant, all of which were put in issue by the denials of the answer, are, in substance:

(a) That the power house and power-generating machinery were erected "below the base of the dam", with the alleged result that if the waters rose in the reservoir above a gauge height of 240 feet they would be discharged over the top of the dam and into and upon the power plant, and that, if so discharged, "great damage" would thereby be inflicted upon the power house and upon its machinery. (Compl. Par. IV; Tr. 4-5).

(b) That the apron erected immediately below the base of the dam, with bulkheads at its sides, was erected (1) for the protection of the power plant, and (2) that the effect of the apron was to increase "not only the quantity of water" but the force and violence of the

water released through the flood gates. (Compl. Par. IV; Tr. 5).

Matters relating to the construction of a plant of this character are of course in the field of engineering, and presumably for the purpose of supporting these allegations appellees called as their witnesses two engineers, namely, W. J. Roberts, of Tacoma (Tr. 175-197), and Lyman Griswald, of Portland. (Tr. 144-150). Neither of these engineers was asked a single question involving, or which was designed to furnish any information concerning, any of these allegations of negligence in the construction of the power plant, nor did they or any other witness give any testimony regarding such allegations. No testimony was offered to show how close to the base of the dam the power house was located, or as to whether, if the lake waters were discharged over the crest of the dam, they would reach the roof of the power house in falling, or as to whether they would cause any damage if they did fall on it. (See Tr. 4-5).

As to the effect of the apron erected immediately below the base of the dam, with bulkheads at its sides, forming a chute, and which was alleged "to increase not only the quantity of water in said Lewis River below the dam, but the force and violence of such water as might be released through the flood gates", (Tr. 5) we have long wondered how this apron or chute could increase the *quantity* of water in the river, since it obviously could pass along only so much water as was being discharged upon it through the flood gates at the time, and which of necessity would flow down the river whether the apron or chute were there or not.

Further, there is no evidence that the apron or chute increased the force or violence of the water released through the flood gates. The only testimony touching this matter was that furnished by engineer W. J. Roberts, who when asked as to what effect the fall of the water from elevation 205 (the spillway crest) would have on the lower stream, replied, in substance, that whatever fell through the gates would be added to the water of the stream below—which is merely a statement of the obvious—but that it should be remembered that "water is very inelastic, and that it will have a considerable slow-down before it goes very far from the tail-race", adding that the fall of the water would increase the velocity of the stream "a little", but that the velocity depended "on the slope of the stream"—a matter to which we will later direct more detailed attention.

So far as disclosed by the record, there is not an iota of proof of any defective or negligent construction of the plant, or even a suggestion that the power house should have been differently located or constructed. The mere undisputed fact that the overwhelming flood finally made it advisable to shut down the plant and temporarily disconnect the supply of electricity for the operation of the gates (Tr. 131-133) is wholly without significance or relevance to any charge of negligent construction.

Not only did appellees' witnesses fail to offer a word of criticism of the construction of the power plant, or the breath of a suggestion that in any respect it should have been located or constructed differently, but they brought out in their testimony enough to establish one of appellant's affirmative defenses, namely, that the plant had

been constructed by permission of the United States Government, acting by and through the Federal Power Commission, as well as by permission of the State of Washington, acting by and through its Department of Conservation and Development. (See Answer, Tr. 16-17). The testimony of appellees' witness, E. J. F. Calkins, an engineer in the United States Bureau of Geological Survey at Tacoma, shows the jurisdiction exercised by the Federal Power Commission over the project (see Tr. 91-92, 98), pursuant to the Federal Water Power Act (Act of June 10, 1920, Chapter 285; 41 Stat. 1063; 16 U. S. C. A., Sections 791-823). In that Act a project of this character is defined as follows:

> " 'Project' means complete unit of improvement or development, consisting of a power house, all water conduits, all dams and appurtenant works and structures (including navigation structures) which are a part of said unit, and all storage, diverting, or forebay reservoirs directly connected therewith," * * * (16 U. S. C. A., Sec. 796)

Section 9 of the Federal Water Power Act further required the approval by the Federal Power Commission of maps, plans and specifications for such a project, and required all subsequent changes therein to be similarly approved by the Commission. (U. S. C. A., Sec. 802).

Said Section 9 also required the applicant desiring to construct such a project to furnish to the Federal Power Commission satisfactory evidence that all applicable requirements of state laws had been complied with. Said Section 9, in its entirety, is as follows:

"*Information to accompany application for license.* Each applicant for a license hereunder shall submit to the commission—

(a) Such maps, plans, specifications, and estimates of cost as may be required for a full understanding of the proposed project. Such maps, plans, and specifications when approved by the commission shall be made a part of the license; and thereafter no change shall be made in said maps, plans, or specifications until such changes shall have been approved and made a part of such license by the commission.

(b) Satisfactory evidence that the applicant has complied with the requirements of the laws of the State or States within which the proposed project is to be located with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes and with respect to the right to engage in the business of developing, transmitting, and distributing power, and in any other business necessary to effect the purposes of a license under this chapter.

(c) Such additional information as the commission may require." (Act of June 10, 1920, c. 285, sec. 9, 41 Stat. 1068; 16 U. S. C. A., Sec. 802.)

The State of Washington's jurisdiction, acting by and through its Department of Conservation and Development, is set forth in the State Water Code, Section 7358 of Remington's Revised Statutes of Washington, which is a part of the Water Code, as follows:

"7358. *Powers and duties of engineer.* There is hereby imposed upon the state hydraulic engineer the following duties and powers:

(1) The supervision of public waters within the state and their appropriation, diversion and use, and of the various officers connected therewith.

(2) In so far as may be necessary to assure safety to life or property, he shall inspect the construction of all dams, canals, ditches, irrigation systems, hydraulic power plants, and all other works, systems and plants pertaining to the use of water, and he may require such necessary changes in the construction or maintenance of said works, to be made from time to time, as will reasonably secure safety to life and property."

Section 7388 of Remington's Revised Statutes of Washington provides:

"7388. *Storage dams—Approval by engineer.* Any person, corporation or association intending to construct any dam or controlling works for the storage of ten-acre feet or more of water, shall, before beginning said construction, submit plans and specifications of the same to the state hydraulic engineer for his examination and approval as to its safety. Such plans and specifications shall be submitted in duplicate, one copy of which shall be retained, as a public record, by the state hydraulic engineer, and the other returned with his approval or rejection indorsed thereon. No such dam or controlling works shall be constructed until the same or any modification thereof shall have been approved as to its safety by the state hydraulic engineer."

Section 10760 of Remington's Revised Statutes of Washington provides:

"10760. *State departments created.* There shall be, and are hereby created, departments of the state government which shall be known respectively as, * * * (5) the department of conservation and development";

and Section 10819 thereof provides:

"10819. *Department of conservation and development—Divisions.* The department of conser-

vation and development shall be organized into, and consist of, five divisions, to be known respectively as, * * * (5) the division of hydraulics."

In this connection it will be noted that appellees' engineer, in discussing construction details of the Ariel project, testified as follows:

> "These notes to which I am referring were not made upon the hearing; these are the drawings of the structure of the gates and the dam; they were made by my assistant under my direction about April, 1934; I was there at the time they were made. I might add to that, to make it clear to the court and the jury, if it is permissible, that there were obtained from the Hydraulic Engineer of the State of Washington, the notes about the size and openings, and they agree, accord, exactly, with the testimony that has been given here. I got them from the records myself." (Tr. 179).

The presence of this information in the office of the State Hydraulic Engineer of the State of Washington, as an official public record, confirms the presumption of lawful compliance by appellant with the applicable state statutes and the presumption of proper performance of the official duties of the State Hydraulic Engineer.

It thus appears from the record that appellant's first affirmative defense, wherein it is alleged that the project was constructed in compliance with federal and state laws, was established out of the mouths of appellees' own witnesses.

The status of appellant's Ariel project, as one duly authorized by governmental authority, has been twice presented to and recognized by the Supreme Court of

the State of Washington. In *Funk v. Bartholet, State Supervisor of Hydraulics,* (1930) 157 Wash. 584; 289 Pac. 1018, after citing the pertinent sections of the Washington statutes, the Supreme Court of Washington, sitting *en banc,* quotes the findings made by the State Supervisor of Hydraulics upon the application of Inland Power & Light Company, appellant herein, for a permit to appropriate and store 4000 cubic feet per second of the waters of the Lewis River at the Ariel site, among which findings appears the following: (289 Pac., at 1021)

> "The applicant has made extensive surveys, studies and investigations of the proposed development, including an elaborate geological study by diamond drilling and excavation of the dam sites; the applicant has also in cooperation with the United States Geological Survey, made gauging and kept records of the stream flow for many years;"

The Supreme Court of Washington in the same case quotes the Findings of Fact entered by the State Supervisor of Hydraulics as a basis for his issuance of appropriation and storage permits for the Ariel project, and for his decision that such permits should issue upon payment of the required fees, such findings, among others, including the following: (289 Pac. at 1021)

> "IV. That the plan of development proposed is in line with the highest feasible development of the waters of the stream.
>
> "V. That the applicant, the Inland Power & Light Company, has the financial and engineering ability to develop the project as proposed and that it intends in good faith to proceed with such development;"

In *Funk v. Inland Power & Light Company,* (1931) 164 Wash. 110; 1 Pac. (2d) 872, the issuance of such state permits to appellant for its appropriation and storage of the waters of the Lewis River at Ariel was again recognized and commented upon by the Supreme Court of Washington.

It is not alleged or claimed that appellant's project was unlawfully constructed, or that the project in any way constituted a nuisance, and no such contention could be made. In this connection we invite the Court's attention to the case of *Jeffers v. Montana Power Co.,* et al., (1923) 68 Mont. 114; 217 Pac. 652, in which it was charged that the operations of the power company and its manipulation of the flow of the Madison river caused ice jams to form in the river, with the result that when the flow of the river was increased as an incident to the operation of that company's Hebgen dam, the river channel became incapable of carrying the water, causing it to overflow plaintiff's lands, to his damage, and that such damage was proximately caused by the operation of the dam in the manner alleged. In affirming a judgment, following a directed verdict in favor of the power company and other defendants, the Supreme Court of Montana says (217 Pac., at page 659) :

> "The impounding of the waters of the Madison river in the Hebgen reservoir and the transportation of them through the channels of the Madison river for a lawful purpose, being a lawful business, it cannot be said that to do so is a nuisance per se. 29 Cyc. 1159.

> "It is fundamental that without a wrong there is no cause of action, * * *. The mere fact that the plaintiff may have suffered damage is not of itself sufficient; there must be the violation of a duty recognized by law. * * *
>
> "That persons impounding waters are not insurers against damage caused thereby, but are held only to the exercise of ordinary care in the construction and operation of their plants is so clearly and forcibly pointed out by Mr. Justice Holloway in the case of Fleming v. Lockwood, 36 Mont. 384, 92 Pac. 962, 14 L. R. A. (N. S.) 628, 122 Am. St. Rep. 375, 13 Ann. Cas. 263, that doubt can no longer exist as to the rule established in this state:"

By alleging affirmatively in its answer that its Ariel project was constructed pursuant to state and federal authority, appellant did not, nor does it now, imply that such authority allowed appellant *to operate* its plant negligently, or negligently to damage anyone's property. That defense was intended solely to negative the charge of the complaint that the plant was in any respect negligently *constructed,* and the facts and authorities above referred to fully establish that affirmative defense.

**1-B There is no evidence of negligence in appellant's operation of the flood gates, or in appellant's handling of the waters**

The allegations of appellees' complaint in respect of alleged negligence in the control exercised by appellant over the waters of the river, and in appellant's operation of the flood gates are, in substance:

> That notwithstanding the rainfall and rising waters of the river (and the alleged negligent con-

struction of the dam), appellant (a) negligently permitted the waters of the lake to rise and remain at or above elevation 235; and (b) negligently failed to open its flood gates sufficiently to permit the accumulated waters to flow gradually past its dam, "as they were wont to do by nature"; and (c) on or about midnight of December 21, 1933, "carelessly and negligently * * * opened all its aforesaid flood gates" and thereby caused vast quantities of water, "so carelessly impounded" by the dam, "to be suddenly and with great force discharged", thus increasing the volume and force of the river and thereby disabling the power house machinery, so that "defendant was unable to close its said flood gates" and they "were forced to remain open" for approximately 24 hours, and that during such 24-hour period approximately 17,000 acre feet of water, in addition to the normal flow of the river, were discharged through the flood gates; all to appellees' damage. (Tr. 5-8).

Although the proper method of operating a project of this character would appear to be a subject in the field of engineering knowledge, equally with matters of proper project construction, neither of appellees' engineers, nor any other witness, was asked a single question as to the elevation at which the waters of the lake should have been maintained during the rainy season or during any other season, or as to why or in what respect appellant could be held to be negligent in maintaining the water level of the lake at or above elevation 235; nor did any witness offer any testimony as to the level at which the lake should have been maintained, other than the testimony of the witness David J. Shore that

the normal operating head, or level, was elevation 235. (Tr. 135).

So far as concerns safety of riparian lands along the river, it matters not one whit at what elevation the waters of the lake are maintained. This is as true during flood seasons as at any other time. As long as the outflow of the lake equals its inflow, the elevation of the lake will remain stationary. As shown by the testimony, the only outlets of the waters of the lake are the penstock leading to the power house, which has a capacity of something over 3,000 second feet (Tr. 78), and the five flood gates, which are shown to have had a combined discharge capacity of 129,000 second feet when the lake elevation was 237.6. (Tr. 93, 97 and Ex. 13). If we consider the lake or reservoir as a large box or barrel it is obvious that if 30,000, 60,000 or 90,000 second feet of water is flowing down the river and entering the lake at its upper end, and an equivalent quantity is at the same time being discharged through the gates and the penstock, the lake elevation will remain stationary at whatever elevation it may happen to be at that particular time. When the line made by the pencil on the recording chart (Exhibit 13) indicates a rise in lake elevation, it is because more water is entering the lake at the time than is being discharged through the gates and penstock. Conversely, when such line on the chart indicates a lowering in lake elevation, it is because more water is being discharged through the gates and penstock than is entering the lake from above. (See Tr. 78-79). Whenever the quantity of water entering the lake exceeds the discharge capacity of the penstock, if such excess were not spilled through

the gates "it would build up like in a rain barrel and run over the top." (Tr. 82).

It should be remembered that any water in the lake, to the extent of the penstock capacity, may be discharged through the penstock, but the flood gates cannot discharge any water that is below elevation 205, as elevation 205 is the spillway crest, or the elevation at the bottom of the gates. (Tr. 182).

If the waters of the river were at all times required to flow, and allowed to flow, past the dam "as they were wont to do by nature", there would be no hydroelectric project at Ariel, and no rights could be exercised under the reservoir permit granted by the State of Washington for this project, for the reason that every drop of water stored in the reservoir represents, *pro tanto,* a diminution of the flow of the stream "as it was wont to flow by nature". If that were the law in the State of Washington there would be no hydroelectric development on any river in the state. However, that is not the law.

In *California-Oregon Power Co. v. Beaver Portland Cement Co.* et al., (1934; C. C. A. 9th) 73 Fed. (2d) 555 (affirmed in 295 U. S. 142; 79 L. ed. 1356), this Court, after pointing out that by legislation and judicial action the common law doctrine of riparian rights had been variously modified in the western states, says, with special reference to the law in the State of Washington (at page 564):

> "In Brown v. Chase, 125 Wash. 542, 217 P. 23, 25 (1923), the court, departing from earlier general expressions in its opinions, held that a riparian

owner was not entitled, as against an appropriator, to the undiminished flow of the stream if that flow was not of substantial benefit to him; it said: '* * * while this court has recognized the common-law riparian rights, it has also modified and enlarged that doctrine by ingrafting upon it the necessity of beneficial use by the riparian owner, refusing relief where the riparian owner was not substantially damaged, and granting relief where he was either presently or prospectively so damaged.'

"And in Proctor v. Sim, 134 Wash. 606, 236 P. 114, 117 (1925), the same court said: 'For years past the trend of our decisions and the tenor of our legislation have been to restrict and narrow the common law of riparian rights. * * *' In harmony with that development, the provision of the 1917 Water Code of that state, saving 'the existing rights of any riparian owner,' was construed to protect only 'the right to the beneficial use of such portions of the waters of the lake as are either directly or prospectively, within a reasonable time, proper and necessary for the irrigation of their lands and for the usual domestic purposes."

On this subject the chief operator of the Ariel project, David J. Shore, testified (Tr. 89-90):

"The gates are used to maintain the level of the water in the lake. To illustrate, using the moulding of the Judge's desk as an illustration, as the water comes up, if I didn't open the gates the water would keep coming up. In order to hold it at that level we operate these gates. If the water coming down the river is more than is required to pull the load, and the water starts to build up to a given point, we start to open the gates a little bit to keep it at stream flow. In other words, if the water starts to come above the 235 mark, then we open that little gate a little bit, enough to hold that line. Our effort in the operation of that dam at all times is a stream

> flow operation. After we get our winter storage, then we try so to operate the gates as to let the outflow in our gates equal the intake of the stream above; just like if we was not there."

Further details of the operation of the gates in an effort to maintain stream flow at all times will be found in the testimony at pages 49-50, 78-79, 83-84 of the Transcript of Record. In this connection Exhibit 9 shows the *mean daily* lake elevation for the entire month of December, 1933 (recapitulated as part of the data shown in Table II of the Appendix to this brief), from which will be observed what a narrow fluctuation in lake elevation was permitted, although the discharge of water through the gates during that month varied from 1000 second feet on December 1st to 129,000 second feet on December 22nd. The greatest variations in lake elevations occurred during the critical stages of the flood, or from December 20 to December 22, both dates inclusive. These occurred for reasons disclosed in the testimony, and which we will later discuss.

While appellees alleged that appellant "carelessly and negligently permitted the water of Lake Merwin to rise and remain at a gauge elevation of 235 feet and above the said point", neither in their complaint nor in their testimony is it pointed out at what elevation the water should have been maintained. As already stated, it is physically impossible to lower the lake below elevation 205 at any time when the natural stream flow coming into the lake exceeds the approximately 3,000 second feet carrying and discharge capacity of the penstock. As a practical proposition, even with all the gates wide

open, the lake could not be maintained at elevation 205 whenever the stream flow exceeds the carrying capacity of the penstock, for by whatever quantity the stream flow exceeds the penstock capacity, that excess must be discharged over the crest of the spillway, with a water surface elevation always greater than 205, dependent upon the quantity of water being spilled. A reference to Exhibit 10 discloses that a condition of mean stream flow in excess of 3,000 second feet existed at each and every day from December 4 to December 31, 1933, both dates inclusive. Assuming, for the sake of the argument, that on December 3, 1933, the level of the water in the reservoir was down to elevation 205, and all gates were then fully open, it is obvious that on each subsequent day of that month the height of the water above elevation 205 would be commensurate with the quantity of water then flowing into the lake in excess of the discharge capacity of the penstock.

With this conception of the situation, and with the mean lake elevations shown on Exhibit 9 in mind, let us look at Exhibit 10, which shows discharges, in *second feet,* as follows: 46,600 on December 18; 40,200 on December 19; 44,600 on December 20; 84,600 on December 21, and 114,000 on December 22 (midnight to midnight of each day). The stated flows on December 18, 19 and 20 were each far in excess of the entire capacity of one of the large gates; and on the 21st the natural stream flow nearly equalled the capacity of three of the large gates, or over 60% of the entire discharge capacity of all five gates, each of the large gates having a discharge capacity of approximately 30,000 second feet, and the

small gate a capacity of some 7,000 second feet, at elevation 237. (Tr. 79). With close to two-thirds of the discharge capacity of the gates thus utilized on December 21, by a discharge of water which was *less than the natural stream flow* (for Exhibit 9 shows that the lake elevation rose on that day from 234.6 to 236.9; Tr. 92), there at once becomes apparent the absurdity of the intimation of paragraph V of the complaint that appellant could or should have kept the lake down to elevation 205, or at any rate should not have "permitted the water of Lake Merwin to rise and remain at a gauge elevation of 235 feet and above that point." (Tr. 5-6).

Just one more illustration will demonstrate our point with mathematical accuracy and even more graphically. The reservoir covered four thousand acres. If it be assumed that it had vertical sides like a box, and that the elevation of the lake could have been lowered to 205 at midnight on December 20th, then obviously the maximum storage capacity of such reservoir or box would be the difference in elevation between elevation 205, which is the crest of the spillway (Tr. 182) and elevation 240, which is admitted in the pleadings to be the top of the dam, or 35 feet; and therefore 35 multiplied by 4,000 gives the maximum storage capacity of such box or reservoir, or 140,000 *acre feet.* However, the mean discharge from midnight of December 20 to midnight of the 21st was 84,600 *second feet* (Ex. 10), which is the equivalent of 169,200 acre feet, since one second foot flowing for twenty-four hours equals two acre feet. (Tr. 177). Assuming, therefore, that appellant could have performed the impossible and could have caused

the elevation of the lake level to have been lowered to elevation 205 at midnight on the 20th, and had closed all the gates at that time, the water surface of the lake at midnight on the 21st would have stood at elevation 240, and the difference between 169,200 acre feet and 140,000 acre feet, or 29,200 acre feet, would have been spilled over the dam during the 21st. But of course the sides of the reservoir are not vertical like a box, so the suggested theoretical maximum available storage capacity on the 21st would be somewhat less than 140,000 acre feet, and the discharge for that day would have somewhat exceeded said 29,200 acre feet after utilizing such maximum available storage capacity.

And what would happen on the 22nd, with the lake thus brim full to elevation 240, and running over at midnight on the 21st, as we have just shown? During December 22nd, that is, from midnight of December 21st to midnight of December 22nd, the *mean discharge* for that 24-hour period was a flow of 114,000 second feet (Ex. 10), an amount equivalent to 228,000 acre feet. (Tr. 177; 185). Deducting from this 228,000 acre feet (or flow of 114,000 second feet), the estimated flow of 6,800 second feet which engineer Roberts testified was discharged in excess of the natural stream flow, we have left a *natural mean stream flow* for the 22nd represented by the difference between 114,000 second feet and 6800 second feet, or 107,200 second feet.

So whatever futile efforts appellant might have exerted to start the day of the 21st with the lake elevation at 205, and had that been possible, which of course it was not, the disastrous flood of the 22nd would have

*averaged 107,200 second feet of natural stream flow,* and no power of man could have prevented it.

We will now discuss appellees' allegations that on or about midnight of December 21, 1933, appellant "carelessly and negligently * * * opened all its aforesaid flood gates" and thereby caused vast quantities of water "so carelessly impounded" by the dam "to be suddenly and with great force discharged" into the river, thus increasing the volume and force of the river and thereby disabling the power house machinery, so that "defendant was unable to close its said flood gates" and they "were forced to remain open" for approximately 24 hours, and that during such 24-hour period approximately 17,000 acre feet of water, in addition to the normal flow of the river, were discharged through the flood gates, and that such alleged increase in the volume and force of the river resulted in the damage to appellees' property, in the demanded sum of $15,150.00. (Tr. 7-8).

As to these allegations we may again truthfully repeat that not one of appellees' witnesses discussed, or offered a word of criticism concerning the control exercised by appellant over the flood waters or concerning appellant's handling of the flood gates during the flood, or made any suggestion or intimation as to how or why the flood waters or the flood gates should have been handled in any different manner, or as to possible or probable effects on the river or upon appellees' lands from the handling of the flood waters or the flood gates in any manner differently from that shown in the record.

The allegation that on or about midnight of December 21, 1933, appellant "opened all its aforesaid

flood gates" was obviously intended to create the impression that, at the time stated, *all* of the gates had been closed and were then *all simultaneously* opened. The very records which appellees offered in evidence prove the impossibility of that's being true. Having shown the mean daily elevation of the waters of the lake for the entire month of December by their Exhibit 9, and having also shown the mean daily discharge of the river in second feet for that entire month by their Exhibit 10, and it being undisputed that the waters never flowed over the top of the dam (Tr. 44; 136; 178), we invite appellees' explanation as to how the waters of the river got past the dam during the period of December 18 to December 21, both inclusive, if the flood gates were not then open sufficiently to discharge such waters, as during those days the mean daily discharge of the river below the dam, as shown by their Exhibit 10, was respectively, 46,600, 40,200, 44,600 and 84,600 second feet, of which only approximately 3000 second feet was capable of being discharged through the penstock. Exhibits 9 and 10 show themselves to be official publications of the United States Geological Survey, and in connection with them the witness Calkins, an engineer for that government office, testified that the mean daily elevations of the waters of the lake shown on Exhibit 9 were computed from the record made by the water stage recorder at the dam (Ex. 13), and that the mean daily discharges of water below the dam, in second feet, were computed by the use of a mechanical integrator during the period that the government's recording station below the dam

was functioning (Tr. 99-100) and that for the period beginning on December 18, and while that station was out of commission, due to the flood, such computations were made by using the records made at the Ariel dam, where the size of the gates, the extent to which they are open at any given time (Ex. A-2), and the water surface elevation record shown on the chart (Ex. 13) are known. (Tr. 101; 107). We leave it to appellees now to explain to this Court how these exhibits and such testimony can be successfully impeached or disputed, especially in view of the fact that they did not attempt to do so upon the trial, but, on the contrary, relied on these very exhibits and testimony to show that the peak flood was 129,000 second feet, that the lake elevation was lowered during December 22nd, and that from such data their engineer Roberts estimated that during December 22nd appellant increased the natural flood flow of the stream by a flow of only 6800 second feet. (Tr. 177). The foregoing conclusively shows the absurdity of any claim that the gates were all opened at once.

We have heretofore discussed the allegation that the waters of the lake were "so carelessly impounded" behind the dam (ante, pp. 43 to 47), and nothing need here be added to what is there said.

The allegation that at or about midnight on December 21, 1933, appellant "opened all its aforesaid flood gates" and thereby caused "vast quantities of water * * * to be suddenly and with great force discharged through its said flood gates", naturally provokes the inquiry as to what the existing gate positions were at that time, what change or changes were then made in

gate positions, and as to just how much additional water was thus discharged at that time. The record shows that gates Nos. 1, 2, 3 and 4 were already wide open at midnight of December 21st, and that gate No. 5 was then already open from 9 to 13 feet. Consequently, the "vast quantity" of water additionally imposed upon the stream *at that time* must of physical necessity be confined to the quantity which could be and was discharged as an incident to the completion of the opening of gate No. 5 to its maximum opening of 26½ feet at 12:16 A. M. on December 22nd.

Appellees did not undertake to have any witness calculate the probable additional discharge of water, if any, over and above the natural stream flow during the peak of the flood at midnight on the 21st, or in the early morning hours of the 22nd, although during the trial all existing data for such computations were available to them; nor did appellees offer any testimony to show just how much water that "vast quantity" was, other than to show that over the entire 24 hours of December 22nd, the lake was lowered four feet, and that the total discharge in excess of stream flow for the day was 13,600 acre feet, the equivalent of an *average or mean* flow for the day of 6800 second feet.

In figuring the quantity of water, if any, additionally imposed upon the natural stream flow upon completion of the opening of the last gate, certain factors must be taken into consideration if we are to arrive at a sound conclusion. The witness Shore testified (Tr. 133) that a little before midnight of December 21st gates Nos. 1, 2, 3 and 4 were fully open, these positions being

the result of many days' successive and gradual operations, and that the last gate, No. 5, was then open between 9 and 13 feet. At that time he ordered the last gate opened wide, and its opening was completed at 12:16 A. M. December 22nd; also that up to that time, notwithstanding the then existing gate openings, the water level of the lake was still rising. (Ex. 13; Tr. 133). The witness Shore also testified that at the time the opening of the last gate was completed the gates were "going clear full".

It is obviously impossible to open one of these large gates instantaneously and some appreciable time is required. The order to complete the opening of No. 5 gate was given shortly before midnight, December 21st, and it was finally fully open at 12:16 A. M. of December 22nd, indicating approximately 16 minutes of elapsed time required to complete the existing opening of from between 9 and 13 feet to its full opening of 26½ feet.

The Court will note that at page IV of the Appendix, Table I, footnote (3) reads as follows:

> "Lake elevation not accurately reflected in Exhibit 13 due to physical factors incident to opening gate No. 5."

It would be inferred from examination of Exhibit 13 that upon completing the opening of No. 5 gate, the lake level dropped a half foot in 16 minutes, implying a discharge of 2000 acre feet during that period. 2000 acre feet is equivalent to 87,120,000 cubic feet of water (2000 times 43,560). While the record is silent as to the reason for this apparent sudden drop in the lake elevation, which we will show to have been a physical impos-

sibility, one explanation, which we believe to be the correct one, is the proximity to gate No. 5 of the mechanism of the recording gauge and the stilling well which contains the float; so that the drop shown on the chart, representing a corresponding drop in the water surface of the stilling well, must have been due to the swirling action of the water created by the completion of the opening of gate No. 5, which caused a suction that affected the water level in the stilling well and thus caused the concurrent distorted recording by the pencil on the chart (Ex. 13). The correctness of this explanation is borne out by the examination of the record made by the pencil on the chart (Ex. 13) from midnight to 12:16 A. M. December 22nd — a 16-minute period — during which period the record on the chart indicated a drop of 0.5 feet in elevation, during which same 16-minute period gate No. 5 was being opened from its then position, between 9 and 13 feet of opening, to its full opening. The swirling action of the water which exerted a suction effect on the water level in the stilling well would not have been appreciable with No. 5 gate partly open, but would have increased in severity as the gate was further opened, reaching its maximum effect at 12:16 A. M. when the gate was finally fully open. The combination of a gradual opening of the gate and the correspondingly increasing suction effect on the stilling well would necessarily produce a record similar to that shown for the 16-minute period on the chart, yet without any appreciable change in the water level of the lake itself.

At 10:00 P. M. December 21st, with the lake elevation at 237.4 (Ex. 13) and with gates Nos. 1, 2, 3 and 4 fully open and gate No. 5 open 9 feet, the discharge was 105,000 second feet. (Tr. 129). At 12:16 A. M. with approximately the same lake elevation and all five gates fully open the discharge was 129,000 second feet (Tr. 97 and Tr. 133), indicating a maximum available discharge capacity of the final 17½ foot opening of gate No. 5 to be 24,000 second feet. As the final 17½ foot opening of gate No. 5 required the 16-minute period from midnight until 12:16 A. M., the average discharge capacity available during this period would be 12,000 second feet. 12,000 second feet flowing for 16 minutes, or 960 seconds, is equivalent to 11,520,000 cubic feet of water. It would therefore be impossible to discharge 87,120,000 cubic feet of water, the quantity represented by 0.5 of a foot drop in lake elevation, in 16 minutes through an opening capable of discharging but 11,520,-000 cubic feet of water during the same 16-minute period. The indicated drop in the lake elevation must therefore of necessity be due to other factors, and we believe the explanation just given is the correct one. Had any witness undertaken to testify that 2,000 acre feet of water could have been discharged in 16 minutes through a 17½-foot opening of gate No. 5, any court would have disregarded such testimony as unbelievable. It is contrary to physical possibility and equally unbelievable when distortedly indicated by the chart (Ex. 13). In *U. S. v. Kerr,* 61 Fed. (2d) 800, 803, (C. C. A. 9th; 1932), this Court says:

> "The physical facts positively contradicting the statement of a witness control, and the court may not disregard them. * * * Judgments should not stand upon evidence that cannot be true."

It will also be noted that the above calculations are based on conditions least favorable to appellant, namely, that No. 5 gate was open only 9 feet instead of somewhere between 9 and 13 feet, as testified to, at midnight of the 21st, and that the final opening was therefore 17½ feet additional instead of somewhere between 13½ feet and 17½ feet. It is obvious that had we assumed an existing opening of 13 feet at midnight as the basis for our calculations, or any figure between 9 and 13 feet, the impossibility of discharging through this gate the quantity of water indicated by the chart (Ex. 13) would have been still more apparent.

As to the allegation that the completion of the opening of gate No. 5, and the resulting discharge of water, "disabled" the power house machinery (Tr. 7), the record shows no such result. It is true that the operators were wading in a foot of water (Tr. 132) but the record further shows that they opened the last gate by electrical power, and then voluntarily disconnected the supply of electricity by shutting down the "house machine." (Tr. 133).

The further allegation that following the alleged disablement of the power house machinery "defendant was unable to close its said flood gates" (Tr. 7) is refuted by the record, which shows that each gate may be closed at any time by gravity, through the use of a magnetic brake capable of being operated by hand (Tr. 124-

125; 48). A picture of such hand-operated brake is in evidence as appellant's Exhibit A-1. Appellees' counsel refrained from asking any of the engineers whether there was any method of closing the gates other than by electrical power. It will be further noted that there is neither allegation nor intimation in the complaint or in the record that the gates could not have been opened mechanically without the use of electrical power.

The charge that "defendant was unable to close its said flood gates" being thus disproved by the record, the correlative charge that they "were forced to remain open" for approximately 24 hours necessarily fails also. Not only were the gates not forced to remain open for 24 hours, or for any other period of time, but as a matter of fact they did not remain open for 24 hours. The record shows that approximately 14 hours after the opening of the last gate was completed at 12:16 A. M., namely, at 2:00 P. M. on December 22, a partial closing of gate No. 5 was then made, and that several changes of gate positions in gate No. 5 were made during the 24 hours of December 22. (See Appendix, Table I, page IV).

The complaint further alleges that during the 24 hours of December 22 appellant discharged approximately 17,000 acre feet of water in addition to the normal flow of the river. (Tr.8). The record shows that during that 24-hour period the elevation of the water of the lake was lowered exactly four feet. (Ex. 13). Assuming that the lake had vertical sides, and that the uniform area was therefore 4000 acres at all stages to which the elevation of the lake was actually lowered, the

maximum discharge that could be effected through a four-foot lowering of the water surface over such an area would be 4000 times 4, or but 16,000 acre feet. However, as the banks of Lake Merwin are sloping and not vertical, as appears from the photograph (Ex. 8), the maximum possible discharge would necessarily be less than 16,000 acre feet. The record further shows that at elevation 235 the area is "around 3900 acres". (Tr. 145). Engineer Roberts calculated that the discharge was 13,600 acre feet during the 24 hours of December 22nd, in excess of the natural flow. Assuming, as the record indicates, that the lowering of the water surface during that day was 4 feet instead of 3.4 feet, as testified by Engineer Roberts (Tr. 177), then his computed excess discharge should be slightly increased, but would still be less than 16,000 acre feet, the actual quantity discharged depending upon the area of the lake throughout the falling elevations.

Thus, out of all this wealth of allegations charging negligent construction of the project and negligent handling of the flood gates and flood waters, we search the record in vain for any suggestion of anything which appellant negligently did, or of anything which appellant negligently failed to do. Three ultimate and undisputed facts are shown by the record, namely: (1) That during the 24 hours of December 22nd the elevation of the water surface of the lake was lowered exactly four feet (Ex. 13); (2) that during that period of time 13,600 acre feet of water in excess of the natural stream flow was discharged through the gates (Tr. 185), though this quantity may vary slightly either way, depending

upon the actual variations in lake area due to the contour of its banks, and to the fact that the lake was in fact lowered 4 feet instead of 3.4 feet as assumed by engineer Roberts in making that computation, and (3) that as the gates were "running full" when all open (Tr. 137), the maximum discharge of 129,000 second feet (Ex. 10) may have represented, at least momentarily, the natural peak stream flow at the time. The occurrence of an *increase in stream flow of 37,600 second feet,* which took place *within a 45-minute period* from midnight to 12:45 A. M. on the 21st, makes it highly probable that this peak of 129,000 second feet which occurred at 12:16 A. M. on December 22nd was caused by a similar rapid rise in the natural stream flow. [See post, p. 83, par. (3)]. No effort was made by appellees to show what part of the peak discharge represented natural stream flow or what part of such peak discharge represented excess, if any, over stream flow at the time of the peak. Appellees contented themselves with showing their computation of the *mean discharge for the day* in excess of stream flow, namely, 13,600 acre feet, or 6800 second feet, based upon a lowering of the lake by 3.4 feet.

In *Brown et al. v. Chicago, B. & Q. R. Co.,* 195 Fed. 1007, (1912; D. C. Nebr.), consolidated actions were brought for damage to crops and for erosion and silting of lands, alleged to have resulted from the defendant's negligence in causing the waters of a stream to overflow plaintiffs' land. The entire opinion is instructive on a number of points involved in the case at bar, but attention is especially directed to the Court's concluding language as follows (at 1012-1013):

> "Summing up the principles applied in these decisions, it may be stated that in an action of this kind it is not sufficient to prove an obstruction of a stream, and that such obstruction contributes to causing an overflow and an injury, but the amount of overflow and damage which is caused by such obstruction must be traced. Ordinarily this requires that a comparison be made by evidence as to what overflow and injury would have existed in the course of nature under similar circumstances if there had been no obstruction, and only for the differences between the results is the one causing the obstruction liable.
>
> "As there was no evidence from which the jury in these cases could have made this comparison, the verdicts were properly instructed for the defendant, and new trials are denied."

It is elementary that negligence is never presumed in an action of this character, but must be proved. Thus, in *Eikland v. Casey,* 290 Fed. 880 (1923; C. C. A. 9th), a flood case, this Court said (at page 882):

> "Liability for damage is not to be assumed without proof of some fault or negligence on the part of the defendants." (Citing numerous authorities).

While the case of *New York Central Railroad Company v. Ambrose,* 280 U. S. 486, 490; 74 L. ed. 562 (1930), involved the alleged negligence of a master toward its servant, the applicable rule in negligence cases is aptly stated as follows (74 L. ed., at 565):

> "In any view of the matter, the respondent (plaintiff), upon whom lay the burden, completely failed to prove that the accident was proximately due to the negligence of the company. It follows that the verdict rests only upon speculation and conjecture, and can not be allowed to stand. (Citing references) * * *

> "It is not sufficient for the employe to show that the employer may have been guilty of negligence—the evidence must point to the fact that he was. And where the testimony leaves the matter uncertain and shows that any one of half a dozen things may have brought about the injury, for some of which the employer is responsible and for some of which he is not, it is not for the jury to guess between these half a dozen causes and find that the negligence of the employer was the real cause, when there is no satisfactory foundation in the testimony for that conclusion. If the employe is unable to adduce sufficient evidence to show negligence on the part of the employer, it is only one of the many cases in which the plaintiff fails in his testimony, and no mere sympathy for the unfortunate victim of an accident justifies any departure from settled rules of proof resting upon all plaintiffs."

The applicable principles in actions for damages based upon alleged negligence are too well understood to warrant further citation of authorities on this phase of the case.

In the absence of any testimony as to what appellant should have done or negligently failed to do, the facts shown by the record, to which we have directed attention, neither constitute negligence nor create any implication of negligence.

**2. The evidence conclusively showed that an unprecedented flood caused the damage to plaintiffs' property, regardless of any conduct of the defendant.**

(Assignment of Error No. I; Second Ground Assigned; Tr. 30-31).

**2-A The flood was unprecedented**

The unprecedented magnitude of the flood of De-

cember, 1933, was impressively established by the testimony of the witnesses Calkins and Griswald, who were preeminently qualified to speak on this subject. Mr. Calkins testified that the maximum flood on the Lewis River recorded by the United States Bureau of Geological Survey for the period covered by the records of that government office was a flood of 60,000 second feet at the Amboy recording station (within the area later absorbed by Lake Merwin), which occurred on December 18, 1917 (Tr. 102-103), and that that discharge represented just an *instantaneous* peak. (Tr. 103). The flow at Ariel is normally roughly 10% greater than at Amboy (Tr. 147), so the peak of that flood at Ariel may properly be assumed to have been approximately 66,000 second feet.

But what of the normal stream flow at Ariel, and below, during the disastrous flood of December, 1933? The government's own record (Exhibit 10) shows a *mean daily flow* for the two whole days of December 21 and 22, a 48-hour period, *far in excess* of the brief peak at Amboy of December 18, 1917. The *mean daily flow* for December 21, 1933, was 84,600 second feet, and during that day the flow steadily increased from a minimum of 61,000 second feet at midnight on the 20th to 73,000 second feet at 12:45 A. M. on the morning of the 21st, and, with but brief slight recessions during the day, continued to increase from that already tremendous flow to a flow of 105,000 second feet at 10:00 P. M. (see Appendix, Table I, page IV), and that, notwithstanding that staggering discharge, the water level of the reservoir rose 1.5 feet during the day (see Ex. 13), which

is the equivalent of approximately 6,000 acre feet of storage, or a mean stream flow for that day of an additional 3,000 second feet.

On the 22nd the mean flow for the day was 114,000 second feet (Ex. 10), or a net mean natural flow for the day of 107,200 second feet, after deducting the 6,800 second feet of excess over stream flow which engineer Roberts testified was released from the lake on that day, with an instantaneous peak discharge of 129,000 second feet, approximately twice the instantaneous peak that had ever previously occurred in the known history of the river.

Mr. Griswald, a consulting engineer, testified that he made or directed the making of all of the investigations on the Lewis River up to the time construction of the dam was begun (Tr. 144), and that he had spent half of his time for the eight years between 1921 and 1929 in investigating the condition of the Lewis River. As a part of such investigation he examined the history of the river as to past floods and freshets, examined log drifts and high water marks, interviewed old ranchers along the river—among them elderly men who had been born on the river—and could find no evidence of any prior flood as high as the flood of 1917 (Tr. 146-149), which, in both duration and peak discharge, appears insignificant when compared with the flood of December, 1933. Had appellant offered any defense testimony in this action and endeavored, independently of appellees' testimony, to prove that the December, 1933, flow was unprecedented in the history of the river, it would not have known how to strengthen the testimony now

shown in the record, as we know of no possible testimony more authentic than that elicited from the memory of the old settlers, coupled with the physical evidence disclosed by log drifts left from prior floods, and the evidence disclosed by the government's own records.

In this Court's earlier opinion in *Eikland v. Casey,* 266 Fed. 821 (1920; C. C. A. 9th), it was said (at page 823):

> "The defendants are bound by this testimony which they themselves introduced."

In the instant case appellees called the witnesses who gave this testimony concerning the unprecedented character of this flood, and they are bound by it. Appellees offered no conflicting testimony on this subject and made no effort to impeach or contradict it in any way. The record is convincing that the December, 1933, flood on the Lewis River was one of those "extraordinary floods" or "unexplainable visitations" to which this Court refers in the *Eikland* case just cited.

In *Grant v. Libby, McNeill & Libby,* 160 Wash. 138, at 143, 295 Pac. 139, at page 142 (1931), the Supreme Court of the State of Washington quotes Lord Mansfield's definition of "act of God", as follows:

> " 'By "act of God" is meant a natural necessity, which could not have been occasioned by the intervention of man, but proceeds from physical causes alone, such as violence of the winds or seas, lightning, or other natural accident.' 1 C. J. 1173.
>
> "The term is defined in Black's Law Dictionary as follows:
>
> 'Any misadventure or casualty is said to be caused by the "act of God" when it happens by the

> direct, immediate, and exclusive operation of the forces of nature, uncontrolled or uninfluenced by the power of man and without human intervention, and is of such a character that it could not have been prevented or escaped from by any amount of foresight or prudence, or by any reasonable degree of care or diligence, or by the aid of any appliances which the situation of the party might reasonably require him to use.' "

In *Eikland v. Casey,* 266 Fed. 821, at 823 (1920, C. C. A. 9th), this Court quotes from 12 Am. & Eng. Ency. of Law (2d Ed.) 687, as follows:

> " 'An ordinary flood is one, the repetition of which, though at uncertain intervals, might, by the exercise of ordinary diligence in investigating the character and habits of the stream in which it occurs, reasonably have been anticipated. An extraordinary flood is one of those unexplainable visitations whose comings are not foreshadowed by the usual course of nature, and whose magnitude and destructiveness could not have been anticipated or provided against by the exercise of ordinary foresight.' "

While it is true, in the case just cited, this Court said, in substance, that the mere fact that a rainfall exceeded normal expectation did not warrant its classification as an "act of God", the fact remains that, whatever the cause, the flood in the instant case was so far beyond any flood on the Lewis River known to man, either within his records or his memory, or which might reasonably be expected, as to constitute an extraordinary visitation, or an "act of God".

Of course, in the final analysis, the flood's classification as an "act of God", or otherwise, is immaterial.

The real issue, as shown by authorities cited in this brief, is whether appellees' damage was caused wholly by the natural flood flow of the stream, or partly by such natural flood flow and partly by acts or defaults of appellant, within the allegations and proofs, and, if the latter be established, then whether such acts or defaults constituted negligence, having in mind, further, what a reasonably prudent man, informed as to the habits of the stream and taking all factors into consideration, would have done in like circumstances.

An interesting and instructive discussion of what we have just suggested as the real issue in this action will be found in *City of Piqua v. Anna S. Morris et al.,* 98 Ohio St. 42, 120 N. E. 300; 7 A. L. R. 129, at 131 et seq. (1918). The decision emphasizes the point that, even though concurring acts of an individual and of nature produce the damage, the concurring acts of the individual must be wrongful or negligent before he may be held liable for the result.

See also *Brown et al. v. C. B. & Q. R. Co.* 195 Fed. 1007, at 1012 (1912, D. C. Nebr.; cited, ante, at page 57 of this brief).

In *Radburn v. Fir Tree Lumber Co.,* 83 Wash. 643, 644, 145 Pac. 632, 633 (1915), it appeared that the trial court had refused to give the following requested instruction:

> " 'If you find from the evidence in this case that plaintiff's crop was damaged by rain, as well as by any act of the defendant, then and in that event the defendant in this case is not liable for any damages caused to the crop by rain, and you can only allow

plaintiff such an amount of damage as you find, if any, was caused by the defendant.' "

In reversing the judgment of the trial court and granting a new trial the Supreme Court of Washington says (83 Wash. at 644; 145 Pac. at 633):

> "We think this instruction should have been given. It is the law that where a cause attributable to the one charged concurs with a natural or accidental cause, and both contribute to the injury, a party charged shall not be held to answer for more than his share of the wrong or damage done. We think it will require no citation of authority to sustain this proposition."

In *Mulrone v. Marshall,* 35 Mont. 238, at 241, 88 Pac. 797, at 798 (1907), the following instruction was approved:

> " 'You are instructed that when two causes combine to produce an injury, both of which causes are, in their nature, proximate, and both contributing to an injury, the one being a culpable negligent act of the defendant, and the other some occurrence in the nature of an act of God, for which neither party is responsible, then the defendant is liable for such loss as is proximately caused by his one (own) act concurring with the act of God, provided the loss would not have been sustained by the plaintiff, but for such *culpable, negligent* act of the defendant (if there was any such culpable, negligent act).' " (Italics ours).

In commenting upon this instruction the Supreme Court further says (at same page):

> "It seems to us that the jury must have understood that the court was stating a rule of law, and was not attempting to state any fact. They must have understood the instruction to mean that, if they found from the evidence (1) that there were two

> causes which combined to produce the damage, (2) that both of such causes were in their nature proximate, and (3) that one of such causes was the culpable, negligent act of the defendant, and the other an act of God, then the defendant should be held liable for the loss proximately resulting from the two such concurring causes, provided they should further find from the evidence that the loss would not have been sustained but for such culpable, negligent act of the defendant."

A conclusion that the flood in question was not an "act of God" does not carry with it any implication of liability on the part of appellant. As said by this Court in *Eikland v. Casey,* 290 Fed. 880, 882 (C. C. A. 9th, 1923):

> "But the elimination of that question does not compel the conclusion, contended for by plaintiffs, that defendants were liable for the damages caused by the flooding, for there remained the question whether the flooding which caused the damage was attributable to the negligence of the defendants. Nelson v. Casey (C. C. A.) 279 Fed. 100."

**2-B Nature caused the damage to appellees' property**

We revert to the evidence to see whether the damage to appellees' property was caused by the natural flood flow of the river, or was due to the relatively insignificant increase in the natural flow which resulted from appellant's having released from the lake, during December 22nd, 13,600 acre feet of water, or a mean additional flow for that day of 6800 second feet. Pertinent to this inquiry is a consideration of the location of appellees' lands, the character of the soil in reference to its susceptibility to erosion, the quantities of water to

which it was subjected during the early and continuously increasing stages of the flood, and the testimony as to the nature of the damage to their lands, and when and where the damage occurred.

Mr. Grieger bought his Lewis River farm in 1920; he had not previously lived in that community. (Tr. 153). He disclaimed knowledge of what effect prior floods had had on his lands. (Tr. 167).

Prior to the December, 1933, flood the river flowed toward appellees' lands (Tr. 72) but, at their easterly boundary, turned and ran along on three sides of the lands for a distance of approximately three-quarters of a mile. (Tr. 163). Easterly of the Grieger property there was a low place in the lands through which, in freshets, logs would run for a quarter of a mile across the Grieger lands but for a jetty or sheer boom, consisting of a few piling, that had been constructed to turn them down the normal channel. (Tr. 111-112; 120-121). The December, 1933, flood over the Grieger property started at the point of the sheer boom and then came out over their lands (Tr. 168), cutting approximately straight across and through them, as indicated on the pictures (Exhibits 1-7) and on the pencil sketch (Ex. 18).

The soil of Mr. Grieger's river bottom lands was a light silty loam (Tr. 156), brought in by prior floods (Tr. 187), and "bound to be subject to erosion". (Tr. 187). The tortuous bend of the river as it approached Mr. Grieger's lands rendered them especially subject to erosion. (Tr. 195). In the opinion of appellees' engineer,

W. J. Roberts, erosion of the soil on the Grieger place would start "long before" the river attained a flow of 100,000 second feet (Tr. 193), and would continue as the waters rose (Tr. 191); in fact, in his opinion erosion would start when the flow was somewhere around 50,000 second feet and, as the flood increased, erosion would increase, "especially in the tortuous bend" of the river at the point where it left its old channel and went through the Grieger property. (Tr. 194-195). Engineer Roberts further stated that in his opinion erosion would start "pretty early in the flood stage", and that the silty loam would start to erode when the river was flowing at the rate of four or five feet per second. (Tr. 191).

Let us next examine the water conditions on the Grieger lands during the progress of the flood, and note the concurrent discharges at the dam, as shown by Exhibits A-2 and 10, and the concurrent water conditions at other points along the river as disclosed by the testimony. Reference to Table I of the Appendix to this brief will be helpful in this connection, as it shows in convenient form all of the changes in gate positions and the concurrent discharge of water at the dam, to which we will refer. (Note: In examining the log sheet, Ex. A-2, and the compilation from it set forth in Table I of the Appendix to this brief, it should be noted that each day's record begins with "midnight" as the first entry for the day. For example, the "midnight" shown as the first entry for December 10th means the midnight between December 9th and December 10th, and not between the 10th and 11th).

**The record of December 10, 1933.**

On December 10th for a short time "a little water went through" from the sheer boom to Mr. Grieger's place (Tr. 170), and some water backed in over his place on that day but did not stay long. (Tr. 157). On December 10th the peak discharge at Ariel was 61,000 second feet (Ex. A-2, Tr. 127), and the mean flow for that day was 52,000 second feet. (Ex. 10). It kept on raining between the 10th and the 20th. (Tr. 157).

**The record of December 20, 1933.**

Mr. Grieger testified that on December 20th some water backed in on the west side of his lands (Tr. 167) but he did not see whether it came through from the sheer boom on the 20th, as he was not on that part of his farm on that day, but Mr. Grady Phillips, whose farm adjoins Mr. Grieger's property on the east (Tr. 69), testified that it seemed to him that on the 20th the water started over the Grieger pasture land and farm land. (Tr. 70). On December 20th, beginning at midnight of the previous day, the discharge at Ariel was 38,000 second feet. The natural flow of the river steadily increased that entire day, and by 9:30 P. M. on December 20th the discharge was again 61,000 second feet at the dam. (Ex. A-2; Appendix, Table I, page III). The mean discharge at the dam for December 20th was 44,600 second feet. (Ex. 10). At 4:00 P. M. on the 20th the river was very close to the pavement of the main Pacific highway at Woodland (Tr. 60). Between 2:30 P. M. and 9:30 P. M. on the 20th the discharge at the dam had increased from a flow of 50,000 second feet to 61,000 second feet.

(Ex. A-2). At that time the current of the river was very strong. (Tr. 61). Notwithstanding the discharges of water just shown, the elevation of the water surface of the lake rose from elevation 234.5 at 8:00 P. M. on the 20th to elevation 236.1 by midnight (Ex. 13), which was the equivalent of holding back a stream flow of 19,200 second feet during that four-hour period. A further flow of approximately 25,600 second feet was held back between midnight and 12:45 A. M. on December 21st, by letting the lake level rise to elevation 236.5 (Ex. 13), but, notwithstanding such curtailment of stream flow, the spill at the dam increased from a flow of 61,000 second feet at midnight to a flow of 73,000 second feet at 12:45 A. M. on December 21st.

**The record of December 21, 1933.**

On December 21st, the spill at the dam, with minor recessions, increased from a flow of 61,000 at midnight —almost the equal of the 1917 flood—to a flow of 105,000 second feet by 10:00 P. M. Notwithstanding that enormous discharge, the down-river residents were then receiving less than stream flow, for during that 22-hour period the elevation of the lake rose from 236.1 to 237.4. (Note: Under Note (4) at page IV of Table I of the Appendix we have called attention to a clerical error made in the discharge data recorded at 10:00 P. M. on the 21st. We believe this clerical error is obvious, as the results of other gate changes show that the opening of gate No. 5 from 4.6 feet to 9 feet at that time would increase the spill by approximately 5,000 second feet in-

stead of by 500, as indicated in the log sheet entry for 10 P. M. of that day. (See Tr. 129).

The water conditions generally on December 21st are significant. Mr. Grieger testified that the water "came up quite a lot on that day". (Tr. 158). When he came out on the morning of Thursday, the 21st, the water was "maybe five or six feet deep" on his land. (Tr. 169). The spill at the dam varied from 73,000 to 79,000 second feet between 4:15 A. M. and 7:45 A. M. on that day. Mr. Grieger went to town in the morning of the 21st, and when he returned home around noon the water "was then fairly high across the place"; he had no way of judging how high. (Tr. 170). At 2:00 P. M. on the 21st the spill at Ariel was 75,000 second feet. Mr. Grieger did not stay up watching the flood Thursday night, so he admitted he did not know how much wash, if any, occurred on his property that night. Obviously, whether he stayed up or not, the inky blackness of a rainy December night would have precluded him from knowing or ascertaining what erosive changes were occurring to his land under a stream flow which increased from 78,000 second feet at 4:00 P. M. to 105,000 second feet at 10:00 P. M.—a 30% increase in six hours—during all of which time his lands were receiving *less than the natural stream flow,* as during those six hours the water surface of the lake rose from elevation 237.05 at 4:00 P. M. to elevation 237.4 at 10:00 P. M. (Ex. 13), showing a storage during those six hours of 1,400 acre feet, equivalent to a flow at the rate of 700 feet for a 24-hour period, or at the rate of 2800 second feet for that six-hour period.

At the state fish hatchery, located between the dam and the Grieger property, the water which had been below the roadway on December 20th (Tr. 150) was "six to seven feet over the road" at 7:30 in the morning of the 21st. (Tr. 151). At 5:30 that morning the record shows a spill at the dam of 79,000 second feet, and 73,000 at 7:45 A. M. At that time a house located on the lower ground next to the road in the vicinity of the fish hatchery was carried downstream, and the witness Davis followed it to a point about a mile above the Grieger property. At that time three cottonwood trees and other drift were seen floating down the river. (Tr. 151-152).

At the witness Insull's 47½ acre farm near Woodland a three-foot cedar stick, set out by Insull at the front of his house at 5:00 P. M. on the 20th, was submerged when he arose at 4:00 A. M. on the 21st, and his fence was also submerged. At that time he was "drowned by the water" and "could not get out of the house any more"; he "could not see anything, except a terrible stream, and the foam, and the driftwood". (Tr. 60-62). And this under a spill of but 76,000 second feet at the dam at 4:15 A. M. on the 21st!

By 5:00 P. M. on the 21st one of the dikes at Woodland had broken and the lower part of the town was flooded (Tr. 56), and at about 8:00 P. M. the banks of the river were overflowing at Woodland and the witness Jack Wilson stalled his car on the Pacific Highway after he had travelled about 3000 feet from the point where the highway through Woodland turns north toward Tacoma. (Tr. 54-55). The water was then high enough over the highway to get into the motor of a car. (Tr. 56). The

spill at Ariel at 6:30 P. M. on the 21st was 90,000 second feet; and the elevation of the water surface of the lake was still rising.

**The record of December 22, 1933.**

The peak spill of 129,000 second feet occurred at 12:16 A. M. on the morning of December 22nd. During the approximately 14 hours from 12:16 A. M. to 2:00 P. M. on the 22nd the lake elevation lowered from 237.6 to 234.9, or 2.7 feet. For that period of time this is equivalent to an average discharge over the *then average natural stream flow* of only approximately 9250 second feet, the total discharge during that period varying from 129,000 second feet, at the peak, down to 112,600 second feet at 2:00 P. M. At that time gate No. 5 was lowered to a 20 foot opening (Tr. 142), and the spill remained constant at 112,600 second feet from 2:00 P. M. to 6:00 P. M. During those four hours the elevation of the lake was lowered an additional four-tenths of a foot, which is equivalent to an average discharge of 4800 second feet in excess of the then average stream flow, so the natural stream flow during that four-hour period averaged 107,800 second feet. The mean excess over stream flow during the 24 hours of December 22nd was computed by Engineer Roberts to average 6800 second feet (Tr. 177), or *a little less than 6% increase over the natural stream flow.* (Tr. 186).

On the 22nd Mr. Grieger stood on a hill above the water and could see the river cutting out trees on the northeast corner of his land, and farther up could see some of the soil going. (Tr. 158). From 2:00 or 3:00

o'clock on Friday afternoon the river dropped some. Mr. Grieger testified that he couldn't tell much about the wash until Saturday, but as the water went down farther he could see the extent of the wash, and that it had taken out all the soil clear to the gravel and had washed out his fence. His land was covered with driftwood and sand.

The witness Insull testified that the peak of the flood was between 12:00 and 1:00 o'clock on the morning of the 22nd. (Tr. 62).

The witness Jack Wilson testified that he did not observe any rise in the water at Woodland on the 21st after 8:15 in the evening (Tr. 55), but that on the morning of the 22nd the water had filled in the flats, and "went up against the railroad grade and couldn't go any farther", and seemed to be about three feet higher than when he had seen it the night before.

The witness Frank Miles testified that he had made a mark on an "old fashioned cottonwood tree" at the time of the 1917 flood (Tr. 111, 119). The 1933 flood left a mark on that tree which was seven feet higher than the mark he recorded in the 1917 flood. (Tr. 118).

Mr. Calkins, the engineer of the United States Bureau of Geological Survey at Tacoma, testified that the recording mechanism of the federal government's recording station below the dam "was submerged by several feet, and the house itself was submerged", so that the record of that station on and after December 18th had to be estimated. (Ex. 10; Tr. 100, 103). The government also maintained a gauging station just below the mouth of Swift Creek, farther up the river than the

upper end of Lake Merwin, and consequently wholly unaffected by any operation of the gates or by any control exercised over the waters of the lake. At that gauging station "the banks were washed out and the stilling well and part of the house were filled with sand".

The submergence and disablement of the government's own recording stations, *both above and below the lake,* are of striking significance, and indicate that in the construction of these stations the government itself never anticipated that any flood would put them out of service, for it is obvious that unless they were constructed of a height and character adequate to record the stream flow at all times they would fail of their purpose. It will be noted that the government's down-river station properly recorded the flow of the river on December 10th (Ex. 10), although the discharge on that date nearly equalled that of the 1917 flood.

Having in mind the testimony of engineer Roberts that erosion of appellees' lands would begin with a flood of somewhere around 50,000 second feet, and his further statement that erosion would start "pretty early in the flood stage"; the recorded fact that on December 10th the mean flow was 52,600 second feet and the peak flow 61,000 second feet; that on December 20th the flood increased from 38,000 second feet at the beginning of the 24 hours to 61,000 second feet at 9:30 P. M., with 19,200 second feet more of the natural flow then being held back at the dam; that on December 21st the flood rose from 61,000 second feet at the beginning of the 24 hours to 73,000 second feet in 45 minutes, with 25,600 second feet

more of the natural flow then being held back at the dam, and to 105,000 second feet at 10 P. M. on the 21st, with the natural flow still causing the water level to rise behind the dam, can any man reasonably infer that the relatively insignificant quantity of water—less than 6% of the natural flow—by which the natural flow was augmented by appellant on December 22nd would have done measurable damage to appellees' lands that would not have been caused by the natural flow of the river if allowed to run unimpeded through the dam throughout the four or five days of maximum flow? The record shows conclusively that no such inference is possible.

### 3. The evidence affirmatively showed reasonable care by the defendant

(Assignment of Error No. I; Third Ground Assigned; Tr. 30-31)

The standard of care required of those who impound the waters of a stream has been defined by the Supreme Court of the State of Washington in the case of *Anderson v. Rucker Bros.,* 107 Wash. 595, 183 Pac. 70, (1919), affirmed on rehearing (107 Wash. at 604; 186 Pac. 293), wherein the Court, after citing the ancient rule in *Fletcher v. Rylands,* L. R. 1 Exch. 265, says (at 107 Wash. 598; 183 Pac., at 72):

> "But the more recent and, unquestionably, the greater weight of authority holds to a less strict and, we believe, a much more just rule of liability, and one which, while properly protecting the rights of others, encourages business development. That rule is that one who, by means of a dam, impounds the water of a stream, is required to exercise such rea-

sonable care and caution in the construction, maintenance, and operation of the dam as a reasonably careful and prudent man, who was acquainted with the nature and habits of the stream, the features of the surrounding country, the snow and rain falls, and other conditions likely to cause freshets, would exercise under like circumstances. This rule would cover the stream not only in its ordinary and usual condition as to water, but also when in such unusual and extraordinary flood and freshet as such careful and prudent man would reasonably expect; but the dam owner would not be negligent in failing to provide against unprecedented floods or freshets or act of God." (Citing numerous cases).

In the same case, on rehearing, the Court says (107 Wash. at 604; 186 Pac., at 294):

"Generally speaking, there are two chief questions involved in a case of this character. The first is, whether the dam owner must construct and maintain his dam entirely at his own peril, and as an insurer against damage or whether he will be excused from damages caused by floods which he could not reasonably have anticipated, and if the latter be the correct doctrine, then the care required of such dam owner to anticipate freshets and flood waters; and, secondly, whether, as to all floods and conditions which he is required to anticipate, he must maintain his dam at his peril and as an insurer, or will reasonable care be the measure of his duty? In our former opinion we meant to deal only with the first proposition mentioned. It was not necessary to a decision of the case that we should deal with the second proposition above mentioned, because the trial court had instructed the jury that defendant was bound to maintain his dam so that the same would withstand, 'not only the usual and ordinary freshets, but must also be sufficient to withstand such extraordinary freshets as an ordinarily pru-

dent person would reasonably expect to occur.' In other words, the trial court instructed the jury on the theory that the dam owner would be liable, regardless of the question of care or negligence, for damage resulting from the breaking of his dam, as the result of such floods as a reasonably prudent man would be required to anticipate.

"This instruction was certainly as favorable to the appellant as he could have asked because it eliminated from the case the question of the negligence or lack of negligence of the defendant, and imposed upon it the duties of an insurer. We wish to say, however, that in the departmental opinion we did not mean to, nor do we now, either approve or condemn the instruction given by the trial court; we only hold that it was as favorable to the appellant as any view of the law would justify, and therefore he is not in position to complain.

"On the first above mentioned question we intended to hold, and we now hold, that the dam builder and owner does not build and maintain the dam at his absolute peril and is not an insurer, but that, on the contrary, he will be excused by acts of God, or floods which he could not have anticipated, and that he would be required to anticipate only such floods as a reasonably prudent man, acquainted with all of the surrounding circumstances, would anticipate."

Furthermore, as said in *Jones v. California Development Co.*, 173 Cal. 565, 574, 160 Pac. 823, 827 (1916):

"The underlying principle governing the decision of all these cases which deal with extraordinary water conditions, whether created by the ocean or by unexpected and unprecedented floods, is that in such stress the landowner may use every reasonable precaution to avert injury from his land, and whether or not his conduct be reasonable will be

> determined by existing conditions and not by after consequences; so that if the acts of the landowner be, in the light of the existing circumstances, not unreasonable, he will not be held liable for consequent damage which by these reasonable acts may be inflicted upon another landowner. It follows herefrom that the acts of protection themselves may differ in kind and character, but however they may differ, the test of the doer's legal liability is: Was the particular act which he did reasonable in view of the existing circumstances?"

The case last cited is unique and interesting, in that the acts of the appellant causing the damage therein complained of consisted in so controlling the waters of the Colorado River, and in withdrawing them so rapidly from the lands of the appellees that their lands were eroded and gulleys formed in them.

The principle of law enunciated in the case just cited was followed by the Supreme Court of California in *Weinberg Co. v. Bixby et al.*, 185 Cal. 87, 96; 196 Pac. 25, 33 (1921).

In the light of these applicable principles of law, let us examine the conduct of the operators of the dam during the flood, as shown in the record, to see if it measured up to the standard required by the authorities cited.

The chief operator, David J. Shore, testified that when the stream reached a peak of 61,000 second feet on December 10th he "began to observe conditions in Woodland", and that "when anything happens that is above normal operation, the operators are naturally anxious about what is happening". (Tr. 137). That discharge of 61,000 feet, it will be recalled, slightly exceeded the

Amboy peak of 1917, but was not quite so high as the resulting assumed peak of 66,000 second feet at Ariel (Tr. 147), yet high enough to create concern in the minds of the operators of the Ariel dam. As said by Mr. Shore:

> "We thought of Woodland at that time. I did not go to Woodland at that time to see what was happening down there, but we got reports from Woodland at that time. The reports came from people living in Woodland. If the water remained at 61, [61,000 second feet] why, there wouldn't be any danger in Woodland. I don't just remember just who was giving me these reports. There was plenty of people calling up, asking us water conditions, at all times,—what we think of the rain, and whether we are going to have more spill, or what have you. (Tr. 137-138) * * *
>
> "It is correct that I stated here on my cross-examination that in my raising the height of the water in the dam, I had these people below in mind; I meant the people in Woodland; those were the ones I was in touch with. As to whether I was referring to Mr. or Mrs. Grieger,—it meant the same thing to me. It was the people below the power house. The agitation that was on, or the evidence of panic that I saw, was from people in Woodland, twelve miles away. (Tr. 139) * * *
>
> "As to whether the reason for impounding the water was not because I had the people in mind but because I had the safety of the dam in mind,—you could run the water twenty foot over the top of that dam, and that dam would still be there. The safety factor of that dam is so far above the actual pressure of the water up to 235, that it is about 5 to 1." (Tr. 139).

The peak of December 10th came and passed, without apparent damage to anyone, but at midnight on the

20th that peak was again not only reached but exceeded, and within a forty-five minute period reached a record-breaking flow of 73,000 second feet at 12:45 A. M. on the 21st.

On the afternoon and evening of December 20th the water had increased from a flow of 50,000 second feet at 2:30 P. M. to 61,000 by 9:30 P. M., although in that interim the lake elevation had risen 1.1 feet (Appendix, Table I, page III), equivalent to a stream flow of over 7500 second feet then held back. At that time Mr. Shore was at Woodland. (Tr. 130). The water was then close to the main street in Woodland, and the city fire apparatus was being moved out. "The people were panicky, and expecting higher water". (Tr. 130-131). After conferring with the Mayor of Woodland, the manager of the telephone company being also present (Tr. 143), Mr. Shore "got in communication with the plant over the telephone, and instructed them to let the water come up a foot". (Tr. 131).

Mr. Shore then returned to Ariel and kept in telephone communication with Woodland. As Mr. Shore expressed it:

> "I conferred back and forth about the water condition there and the water condition there at Ariel. I advised them of my condition and they advised me of theirs. I had the thought of the people in mind,—was trying to cooperate with them." (Tr. 131).

It is of course apparent that all persons whose lands were along the river below the dam, including appellees, as well as those living at Woodland, would all be successively affected by the flood, their individual experi-

ences with the flood waters varying only in degree, depending upon the contour and elevation of their respective lands, their proximity to the river, and the slope and resulting velocity of the river as it ran through or near their lands. It is equally apparent that of all property along the river, appellant's own lands and property were first to be affected by the flood, and most acutely, on account of the narrowness of the river channel at and immediately below the dam, as shown in the photograph, Exhibit 8.

In judging the conduct of the operators of the dam during the flood, the record shows that Mr. Shore had been superintendent of the plant during the entire period of its operation. (Tr. 77). He had become familiar with the normal actions of the river and had of course noted its quick responsiveness to heavy rain and to other climatic conditions, as well as its tendency to rise at times with great rapidity. Thus, reference to the record (Ex. A-2; Appendix, Table I) will show the following significant action of the river during December, 1933:

> (1) An increase from a flow of 17,000 second feet at midnight of December 8th to 61,000 second feet at 12:30 A. M. on December 10th, a 24½ hour period,—the greatest flow in the history of the plant up to that date—followed by a drop in flow to 38,000 second feet at midnight on the 10th.
>
> (2) An increase from a flow of 50,000 second feet at 2:30 P. M. on December 20th to 61,000 second feet at 9:30 P. M., with a concurrent rise in lake elevation of one-tenth of a foot, equivalent to

an aggregate increase in stream flow of 11,800 second feet in that six-hour period.

(3) An increase from a flow of 61,000 second feet at midnight of December 20th to 73,000 second feet at 12:45 A. M. on December 21st—a 45 minute period—with a concurrent rise in lake elevation of four-tenths of a foot, *equivalent to an aggregate increase in stream flow of 37,600 second feet within that forty-five minute period.* A significant feature of this extraordinarily rapid rise in the natural stream flow is that notwithstanding the fact that the operators released an additional 12,000 second feet of stream flow at 12:45 A. M., thus creating a spill of 73,000 second feet at that hour, the lake elevation continued to rise from elevation 236.5 at 12:45 A.M. to elevation 236.75 at 4:15 A.M. (Appendix, Table I, page IV).

An examination of Exhibit A-2 (Appendix, Table I) further discloses the frequent tendency of the river flow to increase in the evening and along toward midnight, thereby reflecting the effect of melting snow during the warmer hours of the day.

After Mr. Shore had testified that he partially closed gate No. 5 at 2:00 P. M. on December 22 (Tr. 86) appellees' counsel, apparently undertaking retrospectively to judge and criticize Mr. Shore's not having sooner closed any of the gates, asked him why he hadn't closed them by hand, to which Mr. Shore replied:

> "As to why I didn't close them by hand,—well, the rain we were having that day; we got three and a half inches of rain, and in our judgment at that

time with that rainfall,—our judgment was prompted by other times from the first of the month on where we would have a freshet, and probably drop; we had no reason to think we would not go further than we had. That is the reason we did not drop them. We could have dropped them at any time." (Tr. 87).

The contention that the gates would have been sooner closed had electrical power been available prior to 2:00 P.M. on the 22nd, as implied in counsel's query as to why Mr. Shore "didn't close them by hand", is refuted by the fact that when electrical power became available at 2:00 P.M., and No. 5 gate was then partially lowered, it was not lowered sufficiently to prevent the discharge from continuing slightly to exceed the stream flow then coming into the lake, as evidenced by the further drop in lake elevation from 234.9 at 2:00 P. M. to 234.85 at 3:00 P. M. shown by Exhibit 13 (Appendix, Table I, page IV), and is further refuted by the additional slight drop in lake elevation shown by the same record to have been permitted to continue and to have continued from 3:00 P.M. on December 22nd until 1:00 A.M. on December 23rd, notwithstanding the fact that additional changes in the position of gate No. 5 were made between such stated hours. (Ex. 13; Appendix, Table I, page IV).

That Mr. Shore was striving only to cooperate with the people along the river below the dam, including those at Woodland, is shown by the testimony wherein he tells of his constant contact by telephone with the people at Woodland, and of their interchange of information concerning their respective local water conditions. (Tr.

131). How could he fail to appreciate their situation, knowing as he did that at 7:55 P. M. on Thursday evening, December 21st, the Town of Woodland "was pretty thoroughly flooded" (Tr. 56), when 85,000 to 90,000 second feet, *less than the then natural flow of the river,* was being released through the gates, and the elevation of the waters of the lake was still rising? (Appendix, Table I, page IV). The *mean natural stream flow* for the entire 24 hours of December 21st was 84,600 second feet (Ex. 10), and during that day the lake elevation rose from 236.1 to 237.6 at midnight.

When Mr. Shore testified that he permitted the waters of the lake to rise to elevation 237 on the 21st, and was asked by appellees' counsel if he could have released the water before then—and was impliedly criticised for not having done so—Mr. Shore replied:

> "As to whether I could have let it out before then—well, if I could outguess the elements, I probably could have. It was just a case of opening the gates. We could open the gates, but our normal head is 235; that is our working head, the head that we bought the machines for. As to whether we could have maintained it at 235 right along if we had wanted to, if we had opened the gates up—we could not have on the night of the 21st. We never at any other time had all the gates wide open. The increase from 235 to 237 occurred practically the last two days. During that period of time we could have let the water out by opening up the gates; but I didn't. That was a matter of my decision." (Tr. 135).

It is obvious that when the gates were all open and "going clear full" at elevation 237, as testified to (Tr.

137), no power of man could have maintained the lake at elevation 235.

As pointed out by authorities already cited (ante, pp. 76 to 79), the operator's decision in the matter of proper and prudent gate operation is to be judged by conditions *as they existed at the time.* In view of a current rainfall of 3.50 inches on the 21st (Tr. 87), equally hard rain on part of the 22nd (Tr. 131), the appalling increase in stream flow of 37,600 second feet recorded during the 45-minute period from midnight to 12:45 A. M. on the 21st, and the demonstrated tendency of the river to attain its greatest flow at night, why should not Mr. Shore, or any other intelligent operator, in the exercise of sound judgment, reach the conclusion that on the night of the 22nd, *the peak would be still greater than it had been on the night of the 21st?* As Mr. Shore expressed it: "We had no reason to think we would not go further than we had." (Tr. 87). Based upon existing conditions and the experiences just undergone, there was every sound reason to believe that the peak on the night of the 22nd would be still greater. All known records of stream flow had by that time been far exceeded. And if such greater peak was coming, what could the operators do to anticipate and minimize its damage to all property below the dam? Obviously nothing, except to reduce the existing elevation of the lake and thus to provide a certain amount of temporary storage in the hope that the peak would not outlast the storage capacity thus created. That was the sole purpose in letting the lake elevation rise 3.3 feet during the 48 hours preceding December 22nd. The only reason this strategy failed of

its purpose was because the duration of the flood continued and its severity increased beyond all expectations.

The expected greater peak on the night of the 22nd did not materialize. Whether due to stopping of the rain, cooler weather, or because the snow on the lower reaches of the river had melted and already run off, or to some other cause or causes, is not shown in the testimony. But Mr. Shore disclaimed ability to "outguess the elements" (Tr. 135), and, like any other operator, could only form his decisions from conditions as they appeared at the time. As soon as conditions improved during the 22nd, so that it seemed safe to do so, a gradual gate closing was started. That also was a matter for the chief operator's decision.

It again seems strange that no engineer, or any other witness, was asked by appellees' counsel what he or any qualified engineer or operator would have done differently in like circumstances; yet no such question was asked and no testimony given by any witness except Mr. Shore himself. As the result of this condition of the record, the verdict, quite aside from other inherent defects to which we will next call attention, stands as the condemnatory decision of the jury, rendered in retrospective contemplation of what Mr. Shore had done in the exercise of his judgment at the time, and rendered without a scintilla of evidence as to what he or anyone else should have done differently, unless, perchance, his conduct is to be condemned for his inability to outguess the elements.

A graphic picture of the conditions which confronted the operators on the night of the 21st and early morning hours of the 22nd, expressed in homely but impressive language, appears at page 132 of the Transcript of Record.

In *Radburn v. Fir Tree Lumber Co.*, 83 Wash. 643, at 646; 145 Pac. 632, at 633 (1915), it is said:

> "* * *; but the law does not put upon men who are engaged in the prosecution of rightful enterprises the duty of anticipating that which is unprecedented, or which has not occurred within the memory of man."

In *Crawford v. Cobbs & Mitchell Co.*, 121 Or. 628, at 642; 257 Pac. 16, at 18 (1927), on rehearing, the following instructions were quoted and approved as correctly stating the law:

> " 'Defendant was under no obligation to impound or hold behind its dam any water naturally flowing into the millpond on November 20, 1921, or at any other time. Such water would be the natural flow of the stream at the time, regardless of whether the stream was at flood stage, and defendant could permit it to flow past the defendant's dam without liability for any damage caused thereby.
>
> " 'If you find from a consideration of all the evidence that the amount of water in defendant's reservoir was not reduced on November 20, 1921, and prior to the damage claimed by plaintiff, but if the level of the water in the millpond remained the same, or increased during the day, the plaintiff cannot recover. It would be immaterial whether the water passing defendant's dam went over the dam or through the headgate which defendant opened.
>
> " 'If you find that the defendant released from its millpond an amount of water greater than was

flowing into said millpond, but you further find that a man of ordinary prudence would have done the same thing under like circumstances, your verdict would be for the defendant.' "

See also *Central Trust Company of New York v. Wabash, St. L. & P. R. Co.*, 57 Fed. 441, at 446-447 (C. C., Dist. Indiana; 1893).

**4. The verdict was purely speculative and without basis for computation.**

(Assignment of Error No. 1; Fourth Ground Assigned; Tr. 30-31)

In assigning as one of the grounds of appellant's motion for a non-suit "that any verdict rendered on the evidence would be purely speculative and without basis for computation", it was not implied, nor do we now imply, that this objection to the verdict runs only to difficulties in computing it, or to any inaccuracy in the method of its computation. Our objection is that there is *no evidence* to support the verdict in the amount awarded, or in any amount; that the verdict is inherently unsound, and could not properly have been rendered in the amount awarded, or in any amount, except upon certain assumptions, as to which there is no evidence in the record.

The authorities hereinafter cited announce the rule that before a verdict in favor of appellees could properly be rendered not only must negligence be proven as alleged, but certain further essential facts must be established.

**4-A It was appellees' duty to prove what part of their damage was caused by nature, and what part, if any, by any negligent act or default of appellant.**

In *Radburn v. Fir Tree Lumber Co.,* 83 Wash. 643; 145 Pac. 632 (1915), the respondent recovered judgment against the Lumber Company for damages to his lands resulting from backwater caused by the obstruction of a stream. Error was assigned in the trial court's refusal to give the following instruction (83 Wash., at 644; 145 Pac. at 633):

> " 'If you find from the evidence in this case that plaintiff's crop was damaged by rain, as well as by any act of the defendant, then and in that event the defendant in this case is not liable for any damages caused to the crop by rain, and you can only allow plaintiff such an amount of damage as you find, if any, was caused by the defendant.' "

In reversing the judgment the court says (at same page):

> "We think this instruction should have been given. It is the law that where a cause attributable to the one charged concurs with a natural or accidental cause, and both contribute to the injury, a party charged shall not be held to answer for more than his share of the wrong or damage done. We think it will require no citation of authority to sustain this proposition."

See *Brown v. C. B. & Q. R. Co.,* 195 Fed. 1007, at 1011-1012; (D. C. Nebr. 1912; ante, p. 57).

*Georgia Ry. & P. Co. v. Johns,* 20 Ga. App., 780; 93 S. E. 521 (1917) involved an action by a land owner against a power company for alleged flooding. It was claimed that certain gates were opened and a great

quantity of water discharged, overflowing plaintiff's land and causing damage. The appeal was from a judgment in favor of plaintiff. The Supreme Court of Georgia held that there was not sufficient evidence to go to the jury. The pertinent part of the opinion, so far as the case at bar is concerned, is found at 20 Ga. App., at 785; 93 S. E., at page 523:

> "Let us grant, however, what the evidence does not show, and say, for the sake of argument, that the total effect of the two dams was to increase slightly the depth of the overflow on the plaintiff's farm. Does it follow that the plaintiff's damage would have been any less if the depth of that overflow had been 14 feet, or only 12 or 13 feet, instead of approximately 15 feet, as the evidence shows that it actually was? We think the difference would be a trifle, if any; and certainly there is no evidence in the record to show that such a difference in the depth of the overflow might have made a material difference in the extent of the damage done. For these reasons, it must be held that neither the defendant's conduct nor its property, nor both together, constituted the proximate cause of the plaintiff's injuries."

**4-B There is no competent evidence of the extent to which any water discharged through the gates in excess of the concurrent natural stream flow increased either the depth or the velocity of the water flowing over appellees' lands, or of the damage, if any, caused by either or both such factors.**

Irrespective of any question of negligence, the record contains no competent evidence as to what additional depth of water was resultingly imposed upon appellees' lands by the relatively insignificant quantity of water

discharged from the lake during the time that the discharge at the dam was exceeding the natural stream flow; nor does the record contain any evidence as to what part of appellees' damage, if any, was caused by such discharge in excess of the concurrent natural stream flow. The only testimony with reference to *the additional quantity* of water thus imposed upon appellees' lands was that of Engineer Roberts, who testified that the *mean quantity* released from the lake during December 22nd was an average flow of 6800 second feet in excess of the natural stream flow on that date, and that such 6800 second feet created an excess over the natural stream flow *of a little less than* 6%; and in testifying as to *what additional depth* upon appellees' lands such additional 6% in the quantity of water discharged and flowing over them would create, Mr. Roberts stated that if there were 6 feet, or 72 inches of water, then flowing over the Grieger place, the result of such 6% increase in quantity would be to create an additional depth of water on the Grieger lands of "a trifle over 4 inches". (Tr. 186). It will be recalled that Mr. Grieger testified that on the morning of Thursday, December 21, he observed that the water was "maybe five or six feet deep" on his lands. (Tr. 169). During that morning the *less than natural flow* released from the lake varied from 73,000 to 79,000 second feet. If at that discharge the water was 5 or 6 feet deep on the Grieger lands, what was its depth at the time of the successively greater discharges of 85,000, 90,000, 100,000 and 105,000, *during all of which times the Grieger lands were being subjected to less than the natural flow of the stream;* and what was

the depth of water on those lands as the flow of the stream progressively increased from 105,000 second feet to its peak of 129,000; and, at the time of that peak, how many inches of the water then flowing across appellees' lands represented discharge from the lake in excess of the concurrent natural flow? There is no testimony as to the depth of the water on the Grieger lands at the time one of the "big cottonwood trees * * * was washed up on top of two apple trees there, and was resting there after the flood" (Tr. 159), or as to how many inches of the water that could produce that situation were the result of appellant's having released "a little less than 6%", or any other percentage, in excess of the average stream flow on the 22nd, or in excess of the natural stream flow at any hour on that day.

One of the allegations of the complaint was that the damage to appellees' lands was caused by an *increase in the velocity* of the water released from the lake, as well as by an increase in its quantity. There is no testimony whatever as to what the velocity of the water would be across appellees' lands, either at the peak of the flood or at any other rate of discharge from the lake. Engineer Roberts testified that:

> "I do not know the difference in elevations in the base of the spillway at the Ariel dam and the line of Grieger's place where the river first gets to it. To figure any velocity of water you have to know the head, the course of the stream, the elevation of the bed of the stream, the width and condition of the banks; * * * To compute it [the velocity] you have to know the slope. To estimate the quantity of water flowing you have to know the slope. If you don't know the drop, in other words the slope,

you can't figure the velocity. The slope is the difference in the elevations at the two points, divided by the horizontal distance. I have not made any such measurements or computations in this case." (Tr. 184-185).

He further testified as follows:

"I do not know how many second feet the river would have to flow to overflow the bank at the Grieger place; I cannot compute it without more data." (Tr. 189-190).

Mr. Roberts then testified that had he been directed to prepare himself on this subject he could have done so, but that it would have taken considerable study to do it. (Tr. 190).

In conclusion on this subject, under re-direct examination by appellees' counsel, Mr. Roberts further testified as follows:

"I would say that the raising of the water to the elevation of 237 feet back of the dam, and allowing it to drop between three and four feet in elevation in a period of twenty-four hours, would have *some effect* on Mr. Grieger's land. I never measured the channel below the dam; I never had occasion to survey it, either for depth or for width. I don't know the sectional area of that channel. As to whether I would be able to testify with any degree of accuracy at all without having possession of those figures, as to how much water it would take to overflow the banks, or to wash away Mr. Grieger's land—*you couldn't do it without some computation that covered the question you asked; in fact, I wouldn't know anything about it at all without those figures.*" (Tr. 196-197; italics ours).

In other words, Mr. Roberts admitted that he lacked *all essential data* for reaching any informed conclusion,

either as to the velocity or as to the quantity of the water which flowed across appellees' lands *at any stage of the flood;* but notwithstanding such lack of indispensable evidence the jury was nevertheless allowed to speculate and to guess, not only as to whether the appellant was responsible for any damage to the Grieger lands but as to the quantum of such damage, and as to how much, if anything, should be awarded to appellees for such damage, if, of course, it were also proven that appellant had been in any respect negligent. Mr. Grieger testified that he did not have any survey or measurements made as to the actual quantity of his land that had been washed over, and testified: "I didn't have the means, and so forth, to make that"; but later he admitted that after the flood he had bought 88½ acres of land in the river bottom adjoining his existing holdings, for which he paid $1,550.00.

In *The Mayor, Alderman and Commonalty of The City of New York v. Franklin Ransom et al.,* 23 How. (U. S.) 487, at 488; 16 L. ed. 515 (1860), the Supreme Court of the United States says (16 L. ed. at 515):

> "Where a plaintiff is allowed to recover only 'actual damages,' he is bound to furnish evidence by which the jury may assess them. * * * He cannot call on a jury to guess out his case without evidence. Actual damages must be calculated, not imagined, and an arithmetical calculation cannot be made without certain *data* on which to make it."

In *Pennsylvania Railroad Company v. Chamberlain,* 288 U. S. 333, at 344; 77 L. ed. 819 (1933), from which we quote on another point at page 98 of this brief, it is held (77 L. ed. at 825) that a verdict must not rest

"upon mere speculation and conjecture". (Citing numerous cases).

In *Midland Valley R. Co. v. Fulgham,* 181 Fed. 91 (C. C. A. 8th; 1910), it is said (at page 95):

> "Conjecture is an unsound and unjust foundation for a verdict. Juries may not legally guess the money or property of one litigant to another. Substantial evidence of the facts which constitute the cause of action in this case of the alleged defect in the lift pin lever and the coupler is indispensable to the maintenance of a verdict sustaining it." (Citing cases).

*United States v. Kerr,* 61 Fed. (2d) 800, 803 (C. C. A. 9th, 1932), involved a claim for total and permanent disability benefits under a war risk policy. In reversing a judgment for the plaintiff, this Court says:

> "Totality and permanency are essential elements and must be established by substantial evidence and cannot be found by speculation, surmise or conjecture. The evidence must show something of relevant consequence, and not be vague, uncertain, incompetent, or irrelevant, not carrying the quality of proof, or having fitness to produce conviction, and be such that reasonable persons may fairly differ as to whether it proves the fact in issue. * * * Some substantial evidence must be presented to carry the case to the jury."

In *Wheelock et al. v. Freiwald,* 66 Fed. (2d) 694, at 698 (C. C. A. 8th; 1933), it was said:

> "No. 4. A verdict cannot be permitted to stand, which rests upon conjecture, surmise, or speculation, but plaintiff must produce substantial affirmative proof that the negligence of the carrier caused the injury, and, 'where proven facts give equal support to each of two inconsistent inferences; in

which event, neither of them being established, judgment, as a matter of law, must go against the party upon whom rests the necessity of sustaining one of these inferences as against the other, before he is entitled to recover.'" (Citing numerous decisions of the Supreme Court of the United States).

In *Huffine v. Alvin Investment Company,* 126 Wash. 490, at 492; 218 Pac. 194, at 195 (1923), it is said:

> "No necessity exists for a minute recapitulation of the evidence to show how conjecture meets counter conjecture, and how surmise must be substituted for proof in order to sustain the verdict. Nor is a review of the authorities illuminating, as the principle of law involved is of the utmost simplicity, and that is that verdicts must rest on evidence and not on guesswork."

In *Crawford v. Cobbs & Mitchell Co.,* 121 Or. 628, at 635, 253 Pac. 3, at 5 (1927), the Court says:

> "Of course, in cases where it is just as probable, on the face of it, that one cause was as likely to have produced the injury as another, there can be no verdict based upon an exact balance of probabilities, which would reduce the verdict to mere guesswork or chance, * * *".

See also:

*New York Central Railroad Company v. Antonia Ambrose, Admx.,* 280 U. S. 486 at 491; 74 L. ed. 562, 565 (1930), cited at page 58 of this brief.

**5. The motion for nonsuit presented the same matters for the consideration of the Court as would a motion for a directed verdict, and the evidence should have been but was apparently not so judged by the trial**

court. There was not a scintilla of evidence to support the verdict.

This point of argument is addressed generally to all four grounds assigned in support of the motion for nonsuit. (Assignment of Error No. I; Tr. 30-31).

In *Maryland Casualty Company v. Millie R. Jones,* 279 U. S. 792, 795; 73 L. ed. 960, at 963 (1929), it is said:

> "The motion for nonsuit—which corresponds to a motion for a directed verdict—presented the question whether the evidence, with every inference of fact that might be drawn from it in favor of the plaintiff, was sufficient in matter of law to sustain a judgment. See Central Transp. Co. v. Pullman's Palace Car Co., 139 U. S. 24, 38; 35 L. ed. 55, 60, 11 Sup. Ct. Rep. 478."

We have heretofore cited the case of *Pennsylvania Railroad Company v. Chamberlain,* 288 U. S. 333-344; 77 L. ed. 819-825 (1933), ante page 95, but respectfully urge the Court to read the entire opinion and to compare the evidence in that case with the evidence in the case at bar, bearing in mind that, as said by the Supreme Court in that opinion:

> "The scintilla rule has been definitely and repeatedly rejected so far as the federal courts are concerned." (288 U. S. at 343; 77 L. ed. at 825).

In the instant case there is not even a scintilla of evidence in support of the several charges of negligence. The most that could be said in criticism of the conduct of the operators of the dam, and that unjustifiably, is that, *when viewed in retrospect,* it was unnecessary for them to have discharged any quantity of water in ex-

cess of the concurrent natural stream flow, for the reason that subsequent developments, which obviously could not be predetermined, proved that the river did not attain a still higher peak on the night of December 22nd and therefore their precautions and efforts to secure some temporary storage in preparation for such expected higher peak ultimately proved to have been unnecessary, and that their judgment was therefore unwisely exercised. But that is a very different thing from a *negligent* act or default.

In referring to a case in the State of New York the Supreme Court of the United States, in *The Union Pacific Railway Company v. McDonald,* 152 U. S. 262, 281; 38 L. ed. 434, at 443-446 (1894), says:

> "And so, as declared by the same court, persons in sudden emergencies, and called to act under peculiar circumstances, are not held to the exercise of the same degree of caution as in other cases. * * * Even in the case of an employe of a railroad company, claiming to have been injured as the result of the company's negligence, this court has said that in determining whether he has recklessly exposed himself to peril, or failed to exercise the care for his personal safety that might be expected, regard must always be had to the exigencies of his position, *indeed to all the circumstances of the particular occasion.*" (Italics ours).

See also *Vascacillas v. Southern Pacific Company,* 247 Fed. 8, at 12, (C. C. A. 9th, 1918).

Our reference to the two authorities last cited does not imply the slightest intimation that the conduct of the operators of the dam was negligent or that their conduct indicated any lack of caution for the safety of

persons or property. The citation of these authorities is only in further support of our contention that the operators' conduct should be judged in the light of the emergency in which they found themselves during an unprecedented flood, and in the light of the circumstances vividly portrayed at pages 131 to 134 of the Transcript of Record.

It is no answer to the testimony to say that the witnesses called by appellees (Schmidt, Tr. 40; Shore, Tr. 77, 124) were employees of appellant, or that Lyman Griswald (Tr. 144) had been appellant's consulting engineer on the project, and therefore their testimony should be disregarded. As said by the Supreme Court of the United States in *Chesapeake & Ohio Railway Company v. Martin,* 283 U. S. 209, at 216; 75 L. ed. 983, at 987 (1931):

> "We recognize the general rule, of course, as stated by both courts below, that the question of the credibility of witnesses is one for the jury alone; but this does not mean that the jury is at liberty, under the guise of passing upon the credibility of a witness, to disregard his testimony, when from no reasonable point of view is it open to doubt."

We cite the following sections of Remington's Revised Statutes of Washington, as involving the same underlying thought, as follows:

> "Sec. 1225. *Examination of adverse party as witness.* A party to an action or proceeding may be examined as a witness, at the instance of the adverse party, or of one of several adverse parties, and for that purpose may be compelled in the same manner and subject to the same rules of examina-

tion as any other witness to testify at the trial, or he may be examined on a commission."

"Sec. 1229. *Testimony not conclusive.* The testimony of a party, upon examination at the trial, or by deposition, or upon interrogatories filed, may be rebutted by adverse testimony."

Assuming, for the sake of the argument, but not conceding, that any employee of one party (such as Shore and Schmidt in the instant case), or any person who, by reason of past employment by one of the parties, might reasonably be assumed to be such party's witness (Lyman Griswald in the instant case), may be treated as "adverse" and his testimony therefore rebutted or impeached, the fact remains that in the case at bar none of the testimony of any of these three witnesses was rebutted or impeached in any respect, nor was any rebuttal or impeachment of any of their testimony attempted.

In our view of the law and the evidence the appellees signally failed to support any of the charges of negligence by them alleged, and the trial court erred in denying the motion for nonsuit.

## ASSIGNMENT OF ERROR NO. II

**The Court erred in entering judgment on the verdict herein, in that said verdict was against law and unsupported by the evidence. (Tr. 30-31).**

The argument advanced and the authorities already cited in reference to the error of the trial court in deny-

ing appellant's motion for nonsuit would seem to render unnecessary further discussion of the error in entering judgment on the verdict. We accordingly urge that what we have said in relation to the motion for nonsuit and of the error in denying it be considered by this Court as addressed with equal force to the error in entering judgment on the verdict. The preservation of the record seemed to make it advisable to assign such action by the trial court as error, notwithstanding the fact that if the denial of the motion for nonsuit shall be held by this Court to have been error, the judgment on the verdict would become a nullity.

## ASSIGNMENT OF ERROR NO. III

**The Court erred in denying defendant's motion for a new trial herein, in that the Court thereby erred as a matter of law, and failed to exercise a sound judicial discretion. (Tr. 30-31).**

Appellant's petition for a new trial appears at pages 20 to 23 of the Transcript of Record. The action of the trial court thereon shows that the petition was summarily denied without even requiring argument on behalf of appellees. (Tr. 23).

In assigning this error we are mindful of the rule that the allowance or denial of a petition for a new trial is discretionary and will not be disturbed by this Court unless an abuse of discretion is apparent from the record. In our view of the record and of the law such an abuse of discretion is apparent. We believe, however, that the legal principles applicable generally to this action, as

well as those which we have cited as especially applicable to the motion for nonsuit under our point numbered "5", ante, pages 97 to 101, make their repetition at this point unnecessary. If this Court accepts them as a correct statement of the law, and agrees with our view that there is no competent evidence to support the verdict, it would seem that the action of the trial court in denying appellant's petition for a new trial was an abuse of discretion.

However, if the denial of the motion for nonsuit was error, and shall be so found by this Court, such finding will render unnecessary further consideration of the ruling on appellant's petition for a new trial.

## CONCLUSION

We regret the lengths to which this brief has extended, but as the motion for nonsuit asserted, in substance, that there was no competent evidence in the record to support the verdict and judgment, we deemed it our burden to demonstrate the truth of that assertion by analyzing all material testimony shown in the record, and felt that we could not reasonably ask or expect this Court to assume that burden for us. Such analysis has but served to strengthen our belief that there is no evidence, even a scintilla, sustaining any negligence charged in the complaint, whether of act or of omission.

The judgment appealed from should be reversed and the action ordered dismissed, or reversed and a new trial granted, thereby affording appellees an opportunity to

supply, if they can, proofs that are indispensable to any sound verdict in their favor but which are now wholly lacking.

Respectfully submitted,

ELLIS & EVANS,
Overton G. Ellis,
Robert E. Evans.

LAING & GRAY,
John A. Laing,
Henry S. Gray,
Attorneys for Appellant.

**(Appendix follows)**

## APPENDIX

Table I of this appendix presents in chronological order for the month of December, 1933, and in tabular form, all evidence disclosed by the Transcript of Record and Exhibits as to gate positions, concurrent discharges of water, and concurrent elevations of the lake, with appropriate reference to the Transcript of Record for the sources of the information so shown. As the information shown in such tabular form could not be so set up on pages of the prescribed size without violating Rule 26 as to the permissible minimum size of type, we have used the annexed form of folded sheet. For more convenient reference we are supplying the Clerk with several additional copies of Tables I and II. Such copies will enable the Court to inspect these Tables whenever referred to in the brief, without having to turn to the back of the brief for that purpose.

Table II of the Appendix is explained in its caption.

# APPENDIX

## TABLE NO. I.

Showing extent of gate openings at hour indicated, and discharge through gates at corresponding time (taken from Exhibit A-2 or the transcript); also lake elevation, at corresponding hours, during week of flood. (Taken from Exhibit 13.)

| 1933 Date | Hour | Lake Elevation (Exhibit 13) | Extent of Gate Opening — Gate No. 1 | Gate No. 2 | Gate No. 3 | Gate No. 4 | Gate No. 5 | Approx. Amount of Spill Sec. ft. | Reference to Transcript |
|---|---|---|---|---|---|---|---|---|---|
| Dec. 1 | Midnight | | ... | ... | ... | ... | ... | 0 | Page 125 |
| | 4:00 pm | | 3 | ... | ... | ... | ... | 1,000 | " " |
| Dec. 2 | Midnight | | 3.4 | ... | ... | ... | ... | 1,000 | Exh. A-2 |
| Dec. 3 | Midnight | | 3.4 | ... | ... | ... | ... | 1,000 | " |
| | 1:00 pm | | 7.2 | ... | ... | ... | ... | 2,000 | " |
| Dec. 4 | Midnight | | 7.2 | ... | ... | ... | ... | 2,000 | " |
| | 6:30 am | | 3.6 | ... | ... | ... | ... | 1,000 | " |
| Dec. 5 | Midnight | | 3.6 | ... | ... | ... | ... | 1,000 | " |
| | 6:30 am | | 10.6 | ... | ... | ... | ... | 3,000 | " |
| | 4:15 pm | | ... | 7 | 7 | ... | ... | 16,000 | " |
| | 9:00 pm | | 24 | 7 | 7 | ... | ... | 22,000 | " |
| | 11:15 pm | | 24 | 12 | 12 | ... | ... | 33,000 | " |
| Dec. 6 | Midnight | | 24 | 12 | 12 | ... | ... | 33,000 | " |
| | 7:00 am | | 24 | 15 | 15 | ... | ... | 41,000 | " |
| | 8:30 pm | | ... | 15 | 15 | ... | ... | 35,000 | " |
| Dec. 7 | Midnight | | ... | 15 | 15 | ... | ... | 35,000 | " |
| | 8:00 am | | ... | 10.6 | 10.6 | ... | ... | 24,000 | " |
| | 4:00 pm | | 24 | 6.4 | 6.4 | ... | ... | 20,000 | " |
| Dec. 8 | Midnight | | 24 | 6.4 | 6.4 | ... | ... | 20,000 | " |
| | 1:00 am | | 10.8 | 6.4 | 6.4 | ... | ... | 17,000 | " |
| | 10:00 am | | ... | 6.4 | 2.4 | ... | ... | 14,000 | " |



| 1933 Date | Hour | Lake Elevation (Exhibit 13) | Extent of Gate Opening — Gate No. 1 | Gate No. 2 | Gate No. 3 | Gate No. 4 | Gate No. 5 | Approx. Amount of Spill Sec. ft. | Reference to Transcript |
|---|---|---|---|---|---|---|---|---|---|
| Dec. 9 | Midnight | | 10.8 | 6.4 | 2.4 | ... | ... | 17,000 | Exh. A-2 |
| | 3:00 am | | 21 | 6.4 | 2.4 | ... | ... | 20,000 | " |
| | 8:00 am | | 21 | 10.6 | 10.6 | ... | ... | 30,000 | " |
| | 2:00 pm | | 21 | 14 | 14 | ... | ... | 38,000 | " |
| | 3:00 pm | | 21 | 16 | 16 | ... | ... | 43,000 | " |
| | 4:30 pm | | 24 | 26 | 16 | ... | ... | 52,000 | " |
| Dec. 10 | Midnight | | 24 | 26 | 16 | ... | ... | 52,000 | " |
| | 12:30 am | | 24 | 26 | 26 | ... | ... | 61,000 | " |
| | 3:00 am | | 10.4 | 26 | 26 | ... | ... | 57,000 | " |
| | 7:00 am | | ... | 26 | 26 | ... | ... | 54,000 | " |
| | 10:00 am | | ... | 26 | 18.6 | ... | ... | 49,000 | " |
| | 12:00 M | | 11 | 26 | 18.6 | ... | ... | 52,000 | " |
| | 2:00 pm | | ... | 26 | 18.6 | ... | ... | 49,000 | " |
| | 10:15 pm | | 14 | 26 | 7.2 | ... | ... | 38,000 | " |
| Dec. 11 | Midnight | | 14 | 26 | 7.2 | ... | ... | 38,000 | " |
| | 3:00 am | | ... | 26 | 7.2 | ... | ... | 34,000 | " |
| | 9:30 am | | ... | 14 | 7.2 | ... | ... | 24,000 | " |
| | 11:00 am | | 17 | 14 | 7.2 | ... | ... | 29,000 | " |
| | 1:00 pm | | 24 | 14 | 7.2 | ... | ... | 30,000 | " |
| | 5:30 pm | | 24 | 17 | 7.2 | ... | ... | 34,000 | " |
| Dec. 12 | Midnight | | 24 | 17 | 7.2 | ... | ... | 34,000 | " |
| | 11:30 pm | | 7.4 | 17 | 7.2 | ... | ... | 30,000 | " |
| Dec. 13 | Midnight | | 7.2 | 17 | 7.2 | ... | ... | 30,000 | " |
| | 6:00 am | | ... | 17 | 7.2 | ... | ... | 28,000 | " |
| | 11:00 am | | 24 | 17 | ... | ... | ... | 25,000 | " |
| | 3:30 pm | | 10 | 17 | ... | ... | ... | 22,000 | " |
| | 9:00 pm | | ... | 17 | ... | ... | ... | 20,000 | " |
| Dec. 14 | Midnight | | ... | 17 | ... | ... | ... | 20,000 | " |
| | 10:00 am | | 10.6 | 13 | ... | ... | ... | 18,000 | " |
| | 1:00 pm | | 3.6 | 13 | ... | ... | ... | 16,000 | " |

| 1933 Date | Hour | |
|---|---|---|
| Dec. 15 | Midnight | |
| | 6:00 am | |
| | 6:00 pm | |
| Dec. 16 | Midnight | |
| Sunday, Dec. 17 | Midnight | |
| | 1:00 pm | |
| | 3:30 pm | |
| | 5:30 pm | |
| | 7:15 pm | Changed gate position |
| Monday, Dec. 18 | Midnight | |
| | 1:00 am | |
| | 7:00 am | |
| | 6:00 pm | |
| | 8:30 pm | |
| Tuesday, Dec. 19 | Midnight | |
| | 12:30 am | |
| | 6:00 am | |
| | 9:00 am | |
| | 11:30 am | |
| | 7:00 pm | |
| Wednesday, Dec. 20 | Midnight | |
| | 10:00 am | |
| | 11:00 am | |
| | 2:30 pm | |
| | 9:30 pm | |

| Lake Elevation (Exhibit 13) | Extent of Gate Opening — Gate No. 1 | Gate No. 2 | Gate No. 3 | Gate No. 4 | Gate No. 5 | Approx. Amount of Spill Sec. ft. | Reference to Transcript |
|---|---|---|---|---|---|---|---|
| | 3.6 | 13 | ... | ... | ... | 16,000 | Exh. A-2 |
| | ... | 13 | ... | ... | ... | 15,000 | " |
| | 14 | 5.5 | ... | ... | ... | 10,000 | " |
| | 14 | 5.5 | ... | ... | ... | 10,000 | " |
| | 14 | 5.5 | ... | ... | ... | 10,000 | " |
| 234.8 | 20.4 | 5.5 | ... | ... | ... | 12,000 | " |
| 235.0 | 20.4 | 10.6 | ... | ... | ... | 18,000 | " |
| 235.1 | 20.4 | 17 | ... | ... | ... | 26,000 | " |
| 235.2 | 20.4 | 17 | 12.4 | ... | ... | 40,000 | " |
| | 10.6 | 17 | 14.8 | ... | ... | 40,000 | " |
| 235.0 | 10.6 | 17 | 14.8 | ... | ... | 40,000 | " |
| 235.05 | 26 | 17 | 14.8 | ... | ... | 43,400 | " |
| 235.5 | 26 | 25 | 14.8 | ... | ... | 50,000 | " |
| 234.8 | ... | 25 | 14.8 | ... | ... | 44,000 | " |
| 234.8 | 14 | 25 | 14.8 | ... | ... | 48,000 | " |
| 234.6 | 14 | 25 | 14.8 | ... | ... | 46,000 | " |
| 234.5 | ... | 25 | 14.8 | ... | ... | 42,000 | " |
| 234.55 | 7.4 | 25 | 14.8 | ... | ... | 44,000 | " |
| 234.5 | ... | 25 | 14.8 | ... | ... | 42,000 | " |
| 234.4 | 10 | 18 | 14.8 | ... | ... | 41,000 | " |
| 234.3 | ... | 18 | 14.6 | ... | ... | 38,000 | " |
| 234.3 | ... | 18 | 14.8 | ... | ... | 38,000 | " |
| 234.3 | 25 | 18 | 14.8 | ... | ... | 44,400 | " |
| 234.3 | 10.8 | 25 | 14.8 | ... | ... | 46,000 | " |
| 234.4 | 25 | 25 | 14.8 | ... | ... | 50,000 | " |
| 235.5 | 25 | 25 | 25.6 | ... | ... | 61,000 | " |



| 1933 Date | Hour | Lake Elevation (Exhibit 13) | Extent of Gate Opening — Gate No. 1 | Gate No. 2 | Gate No. 3 | Gate No. 4 | Gate No. 5 | Approx. Amount of Spill Sec. ft. | Reference to Transcript |
|---|---|---|---|---|---|---|---|---|---|
| Thursday, Dec. 21 | Midnight | 236.1 | 25 | 25 | 25.6 | ... | ... | 61,000 | Exh. A-2 |
| | 12:45 am | 236.5 | 25 | 25 | 25 | 10 | ... | 73,000 | " |
| | 4:15 am | 236.75 | 25 | 25 | 25 | 12 | ... | 76,000 | " |
| | 5:30 am | 236.8 | 25 | 25 | 25 | 14.4 | ... | 79,000 | " |
| | 7:45 am | 236.75 | 25 | 25 | 25 | 10 | ... | 73,000 | " |
| | 2:00 pm | 236.8 | 25 | 25 | 25 | 11.6 | ... | 75,000 | " |
| | 3:30 pm | 237 | 25 | 25 | 25 | 14 | ... | 78,000 | " |
| | 4:00 pm | 237.05 | 25 | 25 | 25 | 18 | ... | 85,000 | " |
| | 6:30 pm | 237.1 | 25 | 25 | 25 | 18 | 4.6 | 90,000 | " |
| | 9:00 pm | 237.3 | 26.5 | 26.5 | 26.5 | 26.5 | 4.6 | 100,000 | " |
| | 10:00 pm | 237.4 | 26.5 | 26.5 | 26.5 | 26.5 | 9 | 100,500* (Note 4) | " |
| | 11:00 pm | 237.5 | 26.5 | 26.5 | 26.5 | 26.5 | 4 | 100,000 | " |
| Friday, Dec. 22 | Midnight | 237.6 | 26.5 | 26.5 | 26.5 | 26.5 | Between 9 & 13 | Spill not shown in testimony | Page 133 |
| | 12:16 am | (See Note 3) | 26.5 | 26.5 | 26.5 | 26.5 | 26.5 | 129,000 | Page 97 and 133 |
| | 2:00 pm | 234.9 | 26 | 26 | 26 | 26 | 20 | 112,600 | Page 142 |
| | 3:00 pm | 234.85 | 26 | 26 | 26 | 26 | 20.5 | 112,600 | " " |
| | 4:00 pm | 234.75 | 26 | 26 | 26 | 26 | 20.5 | 112,600 | " " |
| | 5:00 pm | 234.6 | 26 | 26 | 26 | 26 | 20.5 | 112,600 | " " |
| | 6:00 pm | 234.5 | 26 | 26 | 26 | 26 | 20.5 | 112,600 | " " |
| | 8:30 pm | 234.05 | 26 | 26 | 26 | 26 | 14 | 101,000 | " " |
| | 9:00 pm | 234 | 26.5 | 26.5 | 26.5 | 26.5 | 14.5 | 101,000 | " " |
| | 10:00 pm | 233.85 | 26.5 | 26.5 | 26.5 | 26.5 | 14.5 | 101,000 | Page 143 |
| | 11:00 pm | 233.7 | 26 | 26 | 26 | 26 | 8.5 | 92,700 | " " |
| Saturday, Dec. 23 | Midnight | 233.6 | 26 | 26 | 26 | 26 | 8.5 | 92.700 | " " |
| | 1:00 am | 233.5 | 26.5 | 26.5 | 26.5 | 26.5 | 8.5 | 92,700 | " " |

Note: (1) Figures under respective gate columns indicate extent of gate openings in feet, above spillway crest.
(2) Blank lines mean gate in closed position at time indicated.
(3) Lake elevation not accurately reflected in Exhibit 13, due to physical factors incident to opening Gate No. 5.
(4) Clerical error for 105,000 (see Tr. 129).



# APPENDIX

## TABLE No. II.

Showing relation between mean elevation of lake and mean discharge in second feet, from midnight to midnight of each day.

| 1933 | Mean Daily Lake Elevation (Exhibit 9) Feet above Sea Level | Mean Daily Discharge (Exhibit 10) Sec. feet |
|---|---|---|
| Dec. 1 | 235.0 | 2,070 |
| 2 | 235.08 | 2,800 |
| 3 | 235.1 | 2,870 |
| 4 | 235.0 | 3,110 |
| 5 | 234.95 | 8,650 |
| 6 | 235.6 | 39,100 |
| 7 | 235.15 | 25,600 |
| 8 | 234.6 | 14,800 |
| 9 | 235.0 | 33,500 |
| 10 | 235.2 | 52,600 |
| 11 | 234.3 | 32,100 |
| 12 | 234.5 | 32,700 |
| 13 | 234.0 | 23,400 |
| 14 | 234.2 | 16,000 |
| 15 | 234.4 | 12,900 |
| 16 | 234.6 | 10,100 |
| 17 | 234.8 | 17,200 |
| 18 | 235.1 | 46,600 |
| 19 | 234.5 | 40,200 |
| 20 | 234.6 | 44,600 |
| 21 | 236.9 | 84,600 |
| 22 | 235.5 | 114,000 |
| 23 | 233.6 | 58,100 |
| 24 | 234.3 | 29,000 |
| 25 | 234.9 | 27,900 |
| 26 | 234.3 | 26,100 |
| 27 | 234.2 | 20,200 |
| 28 | 234.1 | 13,100 |
| 29 | 234.1 | 15,100 |
| 30 | 234.1 | 15,200 |
| 31 | 234.1 | 14,500 |